

Historic, Archive Document

Do not assume content reflects current scientific knowledge, policies, or practices.



Entered at the Post Office at Chicago, Ill., for transmission through the mails at second-class rates.

A MONTHLY JOURNAL DEVOTED TO THE ELEVATOR AND GRAIN INTERESTS.

PUBLISHED BY
MITCHELL BROS. COMPANY,
(INCORPORATED.)

VOL. XI.

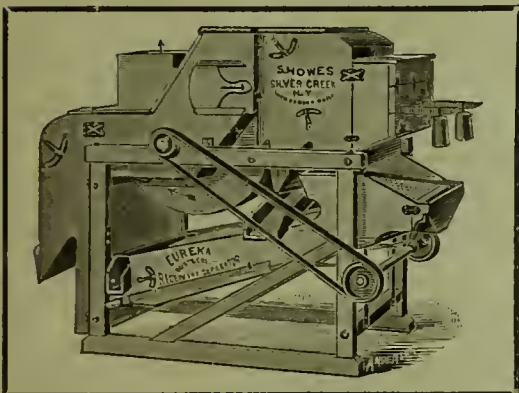
CHICAGO, ILLINOIS, NOVEMBER 15, 1892.

No. 5.

SUBSCRIPTION PRICE,
ONE DOLLAR PER ANNUM.

THE Eureka Grain-Cleaning Machinery

FOR ELEVATOR USE



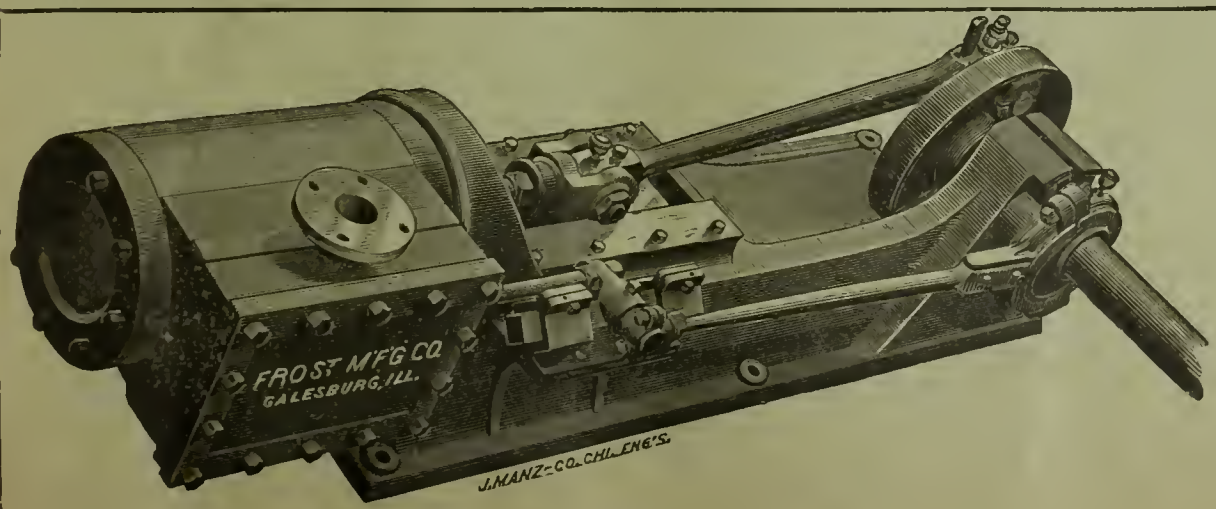
COMPRISES

- The Eureka Warehouse and Elevator Separator.
- The Eureka Double Receiving Separator.
- The Eureka Single Receiving Separator.
- The Eureka Aspirating Separator.
- The Eureka Corn Sheller, Dustless.

For Circulars, prices, etc., address

S. HOWES, SOLE MANUFACTURER, **SILVER CREEK, N. Y.**

CONVEYORS	* * * Elevator Buckets. * * Elevator Boots. * * Elevator Bolts. * * *			BELTING
	<div style="display: flex; justify-content: space-between; align-items: center;"> <div style="text-align: center;">  <p>"EXCELSIOR" RIVET</p> </div> <div style="text-align: center;"> <h2 style="margin: 0;">THORNBURGH MFG. COMPANY,</h2> <h3 style="margin: 0;">MILL AND ELEVATOR SUPPLIES</h3> <p style="margin: 0;">110 & 112 SOUTH JEFFERSON STREET, CHICAGO, ILL.</p> <p style="margin: 0;">Elevating and Conveying Machinery a Specialty.</p> </div> <div style="text-align: center;">  </div> </div>			
	* * * * PULLEYS. * * * * SHAFTING. * * * * HANGERS. * * * *			



FOR PRICES AND DISCOUNTS
— ON —
Elevator Machinery
AND SUPPLIES
— OF —
EVERY DESCRIPTION,
ADDRESS EITHER STEAM OR HORSE-POWER,
The FROST MFG. CO.,
GALESBURG, ILL.

WE ARE HEADQUARTERS

For all kinds of MACHINERY and SUPPLIES
FOR POWER TRANSMISSION, GRAIN ELEVATING AND GRAIN CLEANING,

—FOR—
Grain Elevators and Mills,

SUCH AS
SHAFTING, PULLEYS, HANGERS,
PILLOW-BLOCKS, CLUTCHES, COUPLINGS,
GEARS, SPROCKETS, SET COLLARS,
TAKE-UP BOXES, CRANE-SPOUTS,
LEATHER, RUBBER, COTTON AND LINK BELTING,
"FLEXIBLE" AND "SWIVEL" GRAIN SPOUTS,
ELEVATOR BOOTS, BUCKETS AND BOLTS,
"SPIRAL" AND "BELT" CONVEYORS,
"PLATFORM," "DUMP" AND "HOPPER" SCALES,
GRAIN SCOOPS AND POWER GRAIN SHOVELS.

—ALL SIZES OF—
Farm and Warehouse Fanning Mills,
GRAIN TESTERS, SEED TESTERS,
PERFORATED METALS, WIRE CLOTH,
Power Car Pullers, Oat Clippers, Dustless
Receiving Separators,
POLISHERS, SEPARATORS, GRADERS,
CORN SHELLERS, STEAM ENGINES, FLAX REELS
AND SPECIAL FLAX MILLS, "OVERHEAD,"
"SWEEP" AND "TREAD" HORSE-POWERS,
BAG-TRUCKS, SIX-WHEEL WAREHOUSE TRUCKS, ETC.

**GAS
ENGINES**
OR
STEAM

Capacity, 50 bushels per hour.

GRAIN TESTER.

E. H. PEASE MFG CO. RACINE WIS.

HERCULES
STEEL SCOOP

PATD. SEPT. 28TH 1881.

Grain and Seed Testing Scale.

If you don't
SEE WHAT YOU
WANT,
ASK FOR IT.
We have got it.

GRAIN AND SEED TESTER.

E. H. PEASE MFG. CO.,
RACINE, WIS.

For
Catalogue
and Prices
address,

**SAFEST,
MOST DURABLE
—AND—
Powerful Puller
ON EARTH**

HANDLES
15 to 20 Loaded
Cars at once on
STRAIGHT
and LEVEL
TRACK
and pro-rata on
GRADES
and
CURVES

"HERCULES" POWER CAR PULLER.

SEE OPPOSITE PAGE.

GRAIN ELEVATOR MACHINERY AND SUPPLIES.

OUR SPECIALTY

Is to Furnish Every Description of

MACHINERY OR SUPPLIES

Required for the Equipment or Repairing of

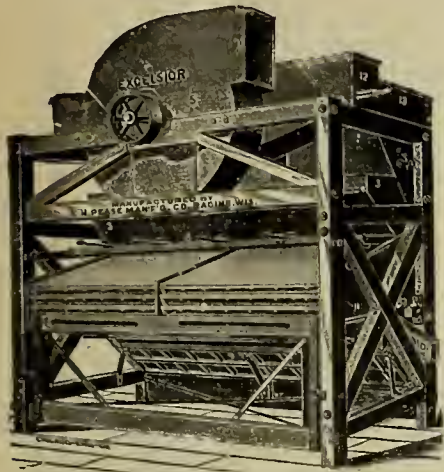
GRAIN ELEVATORS

Such as:

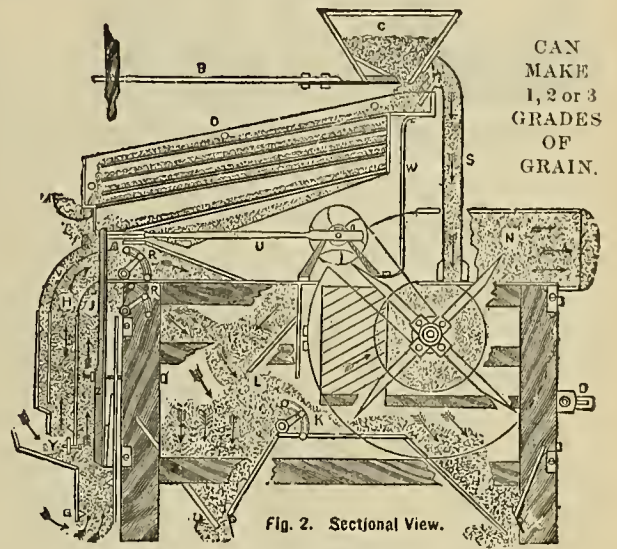
"SWEEP" and "TREAD" HORSE POWERS,
GAS ENGINES, OIL ENGINES, STEAM ENGINES.
SHAFTING, PULLEYS, HANGERS,
PILLOW-BLOCKS, CLUTCHES, COUPLINGS.
GEARS, SPROCKETS, SET COLLARS.
TAKE-UP BOXES, CRANE SPOUTS.
LEATHER, RUBBER, COTTON AND LINK BELTING.
"FLEXIBLE" AND "SWIVEL" GRAIN SPOUTS.
ELEVATOR BOOTS, BUCKETS AND BOLTS.
"SPIRAL" AND "BELT" CONVEYORS.
"PLATFORM," "DUMP" AND "HOPPER" SCALES.
GRAIN SCOOPS, AND POWER GRAIN SHOVELS.
—ALL SIZES OF—

FARM AND WAREHOUSE FANNING MILLS.

GRAIN TESTERS, SEED TESTERS,
PERFORATED METALS, WIRE CLOTH,
Power Car Pullers, Oat Clippers, Dustless
Receiving Separators,
POLISHERS, SEPARATORS, GRADERS,
FLAX REELS AND SPECIAL FLAX MILLS.
"OVERHEAD," "SWEEP" AND "TREAD" HORSE POWERS,
BAG-TRUCKS, WAREHOUSE TRUCKS, ETC.

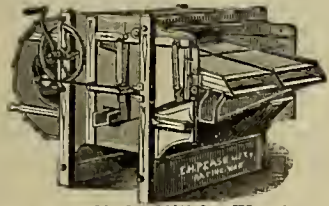


EXCELSIOR DUSTLESS ELEVATOR SEPARATOR,
Cleans, Separates and Grades Perfectly.
HAS NO SUPERIOR IN THE WORLD.

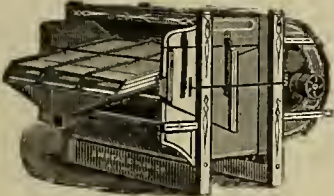


EXCELSIOR SEPARATOR AND GRADER.
The Finest Wheat or Barley Machine on Earth.

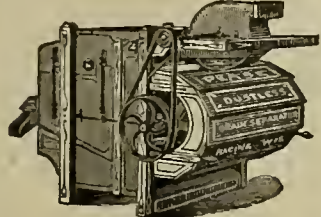
FAMOUS HAND OR POWER CLEANERS COUNTRY ELEVATORS.



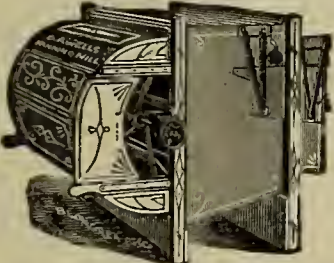
Pease Side Shake Mill for Warehouses.



Pease End Shake Mill for Warehouses.

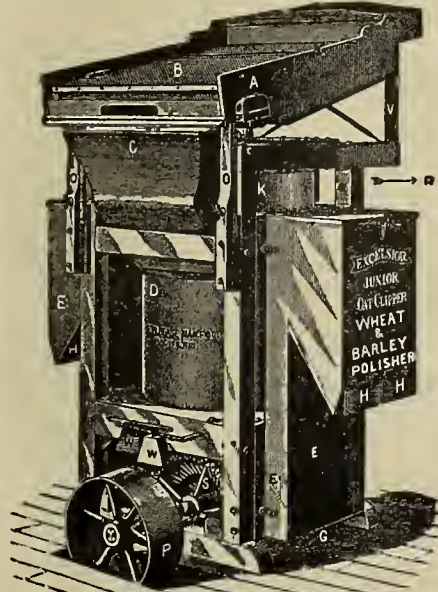


Pease Dustless Separator for Warehouses and Mills.



"Wells" Warehouse Mill.—Extra Large Capacity.

IT WILL PAY
YOU
TO GET OUR
CATALOGUES
PRICES
AND PROOFS OF
SUPERIORITY
BEFORE BUYING
ELSEWHERE.



EXCELSIOR JUNIOR
Oat Clipper, and Wheat and Barley
Polisher, is the Simplest, Most Compact,
LIGHTEST Running, Quickest
Adjustable Machine of its kind
made

PEASE
SPECIAL
FLAX MILLS
ARE
SUPERIOR
TO ALL OTHERS.



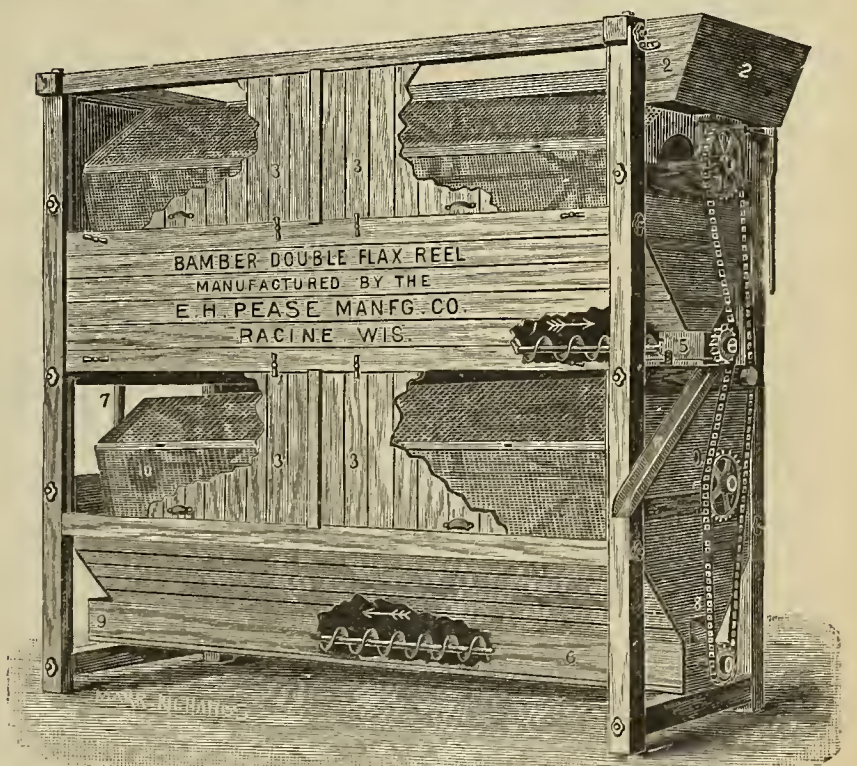
"HERCULES" POWER CAR PULLER.

SAFEST,
MOST DURABLE
—AND—
POWERFUL PULLER
KNOWN.

HANDLES 1 to 20
Loaded Cars at once
on STRAIGHT and
LEVEL TRACK
and pro-rata on
GRADES and
CURVES.

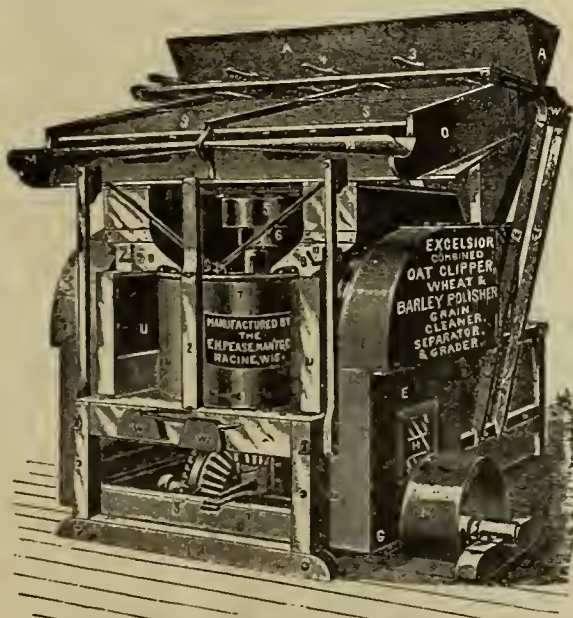
OUR FLAX REELS

Are Adopted and in more General Use by
THE MOST EXTENSIVE FLAX HANDLERS
Throughout the United States, than any similar Machines made.



Made with 1, 2 or 4 Reels in one Chest, and with or without
"Scalping Shoe."

Reels of any desired style or dimensions made to order.



EXCELSIOR COMBINED
Oat Clipper, Polisher, Separator, Grader and General
Dustless Elevator Separator.

This Machine has no Legitimate Rival in the World.
Send for particulars.

WE FULLY WARRANT
THE
SUPERIORITY
OF THE
MATERIALS USED,
THE CONSTRUCTION and
Operating Qualities
OF ALL OUR
MACHINERY.

ADDRESS

—ALL—

LETTERS CAREFULLY

—TO—

E. H. PEASE MFG. CO., RACINE, WIS., U. S. A

SEE OPPOSITE PAGE.

DON'T

Be backward in the matter of asking us for information concerning The Monitor Separator. x x x **ASK** us about its capacity. x x x **ASK** us about its peculiar construction. x x x **ASK** us about the manner in which it effects the separations. x x x **ASK** us about its durability. x x x **ASK** us about the number of sizes we Build. x x x **ASK** us who is using it. x x x **ASK** us what our guarantee is. x x x **ASK** us about prices. x x x **ASK** us about terms. x x x **ASK** us to send you one or more on trial. We'll do it. The risk is ours; not yours. We know what the result will be.



AS A POINTER we will just say that the largest and best appointed elevators in the United States employ and recommend the Monitor Separators. Ask us for copies of their letters.

WESTERN BRANCH:

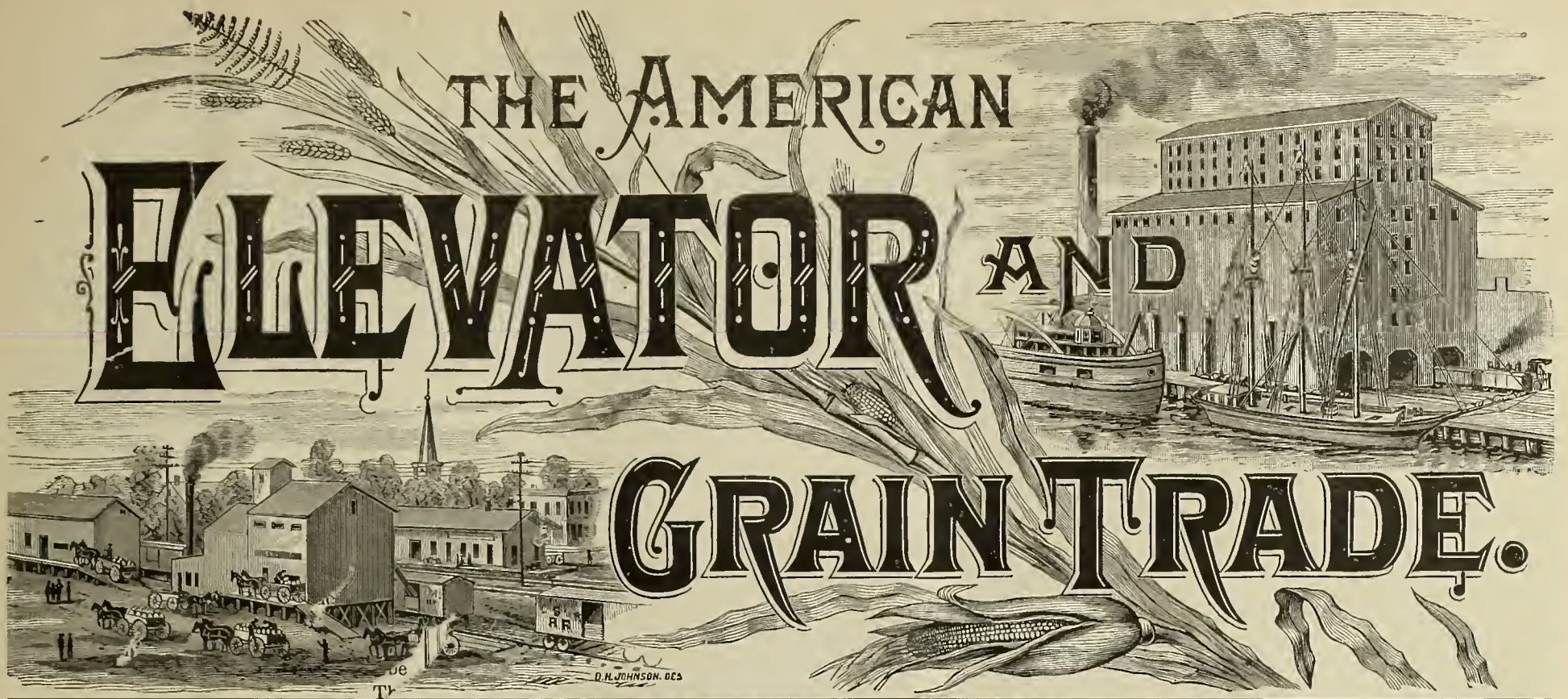
418--420 Third St., South, Minneapolis, Minn.

A. F. SHULER, Manager.

J. J. WALTERHOUSE, Winnipeg, Man., General Agent.

HUNTLEY, CRANSON & HAMMOND,

SILVER CREEK, N. Y.



A MONTHLY JOURNAL DEVOTED TO THE ELEVATOR AND GRAIN INTERESTS.

PUBLISHED BY
MITCHELL BROS. COMPANY,
(INCORPORATED.)

VOL. XI.

CHICAGO, ILLINOIS, NOVEMBER 15, 1892.

No. 5.

SUBSCRIPTION PRICE,
ONE DOLLAR PER ANNUM.

COST OF PRODUCING CORN.

The question of how much it costs a farmer to raise his corn and how much profit or loss there is in the business has been one of considerable interest. In order to get information which is reliable and later than that given by the Federal census, the Commissioner of Industrial Statistics has received carefully prepared estimates from representative farmers of each county in Nebraska. The names of the farmers reporting are given by the county clerks at the commissioner's request. At least ten individual reports are asked for from each county. Every county has been reported, some having the full number of ten individual reports in and others having less than half that number.

The general get-up of the papers, aside from the recommendation of the county clerks, show that the persons making them out had an intelligent idea of what was required, and they have made careful, conservative estimates. It is not expected that the additional reports which may be received or the official estimate of the deputy commissioner will materially alter the figures here given.

The blanks sent out requested the farmer to give the items of cost under the following heads:

Interest on land at 8 per cent., taxes, seed, listing or planting, plowing, harrowing and rolling, cultivating, husking, cribbing, and any additional cost.

Five hundred and thirty-five reports have been received. These show that the highest individual estimate of the cost per acre is made in Nemaha County, \$16.60, and the lowest individual estimate comes from Banner County and is \$4. The highest average for any county is that of Richardson, \$9.48, and the lowest is

McPherson, \$4.32. The average for the whole state shows that it cost \$6.43 $\frac{2}{3}$ per acre. According to the United States census report the average market value of the product of one acre of corn is \$7.58. The difference

A COLLAPSED ELEVATOR.

An unusually strange accident happened to Norton's grain elevator at Chicago, Ill., on October 15. The elevator is situated just north of the Madison street bridge on the west side of the Chicago River. At half past two o'clock in the afternoon of that day James Gubbins, who acts as foreman, heard a noise which he described as sounding like the marching of a couple of thousand men wearing creaking shoes. The noise was the creaking of the corrugated iron with which the building was sheeted. He had barely gotten out of the back entrance when the building collapsed, falling toward the south part of it and north end of cupola falling out, as is shown in illustration made from photograph taken shortly afterward. About 10,000 bushels of grain fell into the river, a few thousand bushels covering the railroad tracks on the west side. The elevator was 80x60 feet and 100 feet high. This height was shortened by the fall about 14 feet, as the building sank just the length of the posts and girders.

The building was erected in 1866 and had a capacity of 160,000 bushels. When it tumbled it had in it 133,000 bushels of grain. A one-story brick shed, containing flour in barrels, situated just south of the elevator, was crushed by the latter's fall and 1,000 barrels of flour destroyed.

The building is thought to be damaged about \$20,000. All the machinery was destroyed.

The total loss to the Norton Milling Company is estimated at \$30,000. The elevator will be rebuilt.



VIEW OF NORTON'S ELEVATOR AFTER IT COLLAPSED.

between this market value and the cost of production leaves \$1.14 $\frac{1}{2}$, which is the profit per acre after the cost of hauling to market is taken out. It does not appear that this last item is given in the reports made to the commissioner of labor.

THE WEIGHING PROBLEM.

BY OBSERVER.

We are a great people. Events of stupendous moment occur to-day and are forgotten to-morrow. No one has time to stop and wonder and moralize, at least no one in the grain business who is still really in it. Perhaps the man who has just now beheld his corner become an intangible reminiscence may have time for reflection, but he is not in a moralizing mood. Ten to one he swears himself into a mind to try it again. Just think! Yesterday the telephone was invented. To-day everybody rings in, hello, and rings out without a thought of the wonderfulness of the invention or the genius of the inventor.

When I was a boy there stood on the canal a large warehouse which had an apparatus for hoisting up sacks of grain from the canal boat to the second, yea, to the third story. And each floor of this immense structure had an iron track laid thereon from one end to the other on which a four-wheeled truck was used to transfer sacks of grain. This warehouse had a capacity of several thousand bushels, and the man who bought wheat for shipment to Cleveland was considered a very rich man indeed. And Cleveland was considered a great grain center perhaps. But now think of our two and three million-bushel elevators! Why, in those days when the visible was all within a radius of a few miles two million bushels of wheat could not have been conceived of, to say nothing of a warehouse which could hold all this and more, too. How easily we get used to big things! Big figures!

Here is Mr. Smith in an obscure village on the railroad. Only a year ago this railroad was an epoch-marker in this village; to-day it is commonplace. It has become a small matter to Mr. Smith himself who uses it to ship his grain to market. But here is a matter in which Mr. Smith is deeply concerned, to-wit: A car of No. 2 Soft Red Wheat. Mr. Smith has paid out money until he has got enough wheat to fill this car, and when it goes forward there is a sort of impression in Mr. Smith's mind that its arrival at destination will be a matter of special care and attention on the part of his consignees. But the man who prods around in the car with his trier has prodded around in many hundreds and thousands of ears before; and the important fact to Mr. Smith that his ear should inspect No. 2 Soft is of no importance whatever to the dusty man with the trier. He discovers a stratum or two of inferior wheat and, with a blunt pencil and a mind entirely free from any concern, writes down No. 3 on his ticket and passes on to the next ear. When the car is rolled into the elevator it runs into the hands of another man who weighs Mr. Smith's ear of wheat with as little concern as Mr. Smith weighs out a couple of mackerel for one of his customers. What is 500 bushels of wheat, more or less, to this weighman. By long experience he knows within a thousand pounds or such a matter just how much a car is going to weigh, and the dexterity with which he piles on the weights, runs out his poise and strikes a balance, is quite wonderful. Now, if Mr. Smith were here to see his car weighed he would want to see the beam carefully balanced, and carefully usually means slowly and cautiously. He would like to see the entry of the weights in the weighman's tally-book and compare them with his own, to be sure, you know, that there is no mistake, before the slide is pulled and his own particular wheat is dropped into the ocean of wheat below.

But to this weighman it is a matter of no concern whatever. He has always handled wheat by the earload and cannot be expected to realize the importance of weighing 500 bushels of wheat as one who has always been used to handling small lots. Time and again have I seen a weighman weigh a car of wheat, pull the slide, and start, with the figures in his head, for his tally-book, which he had left at the other scale. And I have often seen him stop to answer or ask a question before the figures were entered in his weigh-book. But after all his is no exceptional case. To the man who handles great quantities of money, his own considerable stipend at the end of the month seems insignificant, whereas the wage earner who sees and handles money but once a month stows away carefully in his vest pocket his month's pay with a sense of inflation which the cashier is incapable of feeling.

This minimizing of important transactions is naturally the result of association with big figures. The weighman and the inspector come to have no sense of anybody's personal interest in the grain they handle and it is perfectly

natural that this should be the case. In fact, just this state of affairs should exist; but on the other hand Mr. Smith's ear or Mr. Brown's ear should be as carefully inspected and weighed as if the elevator employes had a personal interest in the results. Where then is the trouble? Well, it is just here. There should be some method of proving the inspector's work and the weighman's work, so that, however *disinterested* they may be in the performance of their duties, which is natural and right, this disinterestedness should not develop into gross carelessness (which it is liable to do) and the shipper be obliged to abide by the results, right or wrong.

When a consignee is informed that the grain shipped him was weighed under the supervision of the shipper's own special inspection of weights and grades it seems a pretty strong case; but how is this done? In this way: A special inspector or board of trade inspector is a man about the elevator. He is on good terms with the elevator weighman and employes. He knows the run of the elevator. He has inspected weights and grades again and again and found them correct. Often it is not convenient to be on hand at the right moment, but the ear is loaded and weighed just the same, and when he finds it convenient to get around to it he copies the weights from the weighman's book, gives it a check, and the thing is done. Now, I have seen this done often, and I know of its having been done in other elevators. Of course it is not right, but it is mighty natural—human-nature like.

Notwithstanding the plan of preserving samples differences are continually arising that are difficult to adjust. If the men who do the inspecting and weighing could realize what interests are at stake—in short, if they could put themselves in the place of those who have money at stake—it would be natural for them to be careful. But it is not natural for them to realize, and so they cannot be careful from a self-interested motive. It seems a pretty difficult problem to solve, but it must be solved in time. Wheat exchange should be as safe against loss as money exchange. The scale makers have done their part. The machinery for weighing and inspecting is good if it is kept in order and used carefully, but this is the sticking point.

It seems to me a practical way out of the difficulty in case of ear shipments would be to require the shipper to give actual weights and grade. The railroads should be provided with transfer houses so that the grain could be transferred, weighed, inspected and reloaded. At destination the grain would be again weighed and inspected, but should not be bulked with other grain without comparing with weights and inspection of shipper and transfer house. This would give three different counts at three different points. But whether this would be practical or not experience alone can tell.

The present system of elevator weighing is wrong, wrong, wrong, because the responsibility of determining the value of a car of grain devolves on one man and often there is no way of knowing whether that man has been careful or not.

THE HAY TRADE.

The New England *Homesstead* finds "that the area to hay has more than doubled in twenty-five years, increasing from 20,020,554 acres in 1867 to 42,000,000 acres this year; the harvest has increased more than 300 per cent., from 26,277,000 to 85,000,000 tons, within the same period, and the crop value, which amounted to \$373,000,000 in 1867, is worth \$750,000,000 this year, a money gain of over 100 per cent. The figures are as follows:

THE HAY CROP, 1867-92.

Years.	Acres.	Tons.	Value.	Per ton.
1867.....	20,020,554	26,277,000	\$372,864,670	\$14.4
1870.....	10,861,805	24,525,000	338,969,630	13.6
1875.....	23,507,964	27,873,600	342,203,445	12.2
1880.....	35,803,955	31,925,233	371,811,084	11.6
1885.....	39,849,701	44,731,550	389,752,873	8.2
1886.....	36,501,688	41,796,499	353,437,699	8.4
1887.....	37,664,739	41,454,458	413,440,283	10.1
1888.....	38,591,903	46,643,094	408,493,565	8.7
1889.....	39,500,000	58,304,977	559,443,219	9.6
1890.....	40,000,000	69,965,972	541,536,183	7.7
1891.....	41,000,000	82,559,847	692,677,116	8.4
1892.....	42,000,000	84,000,000	750,000,000	8.8

"It will be seen that the yield of hay per acre has averaged just about two tons during the past two seasons, which was more than the average in former years, but the price of late years has been much less per ton than it was twenty or twenty-five years ago. An agricultural industry that covers 42,000,000 acres, and yields a crop of 85,000,000 tons, worth \$750,000,000 annually, is one that

deserves a much greater amount of attention than has been bestowed upon it in the past, and with more watching and attention it can be made still more valuable.

"Referring next to our exports of hay we find that, within eleven years past, these have not exceeded 36,274 tons in 1890, and that the highest value of hay exports was \$582,838 in the year ending June 30, 1892. The average export movement for the eleven years was 20,078 tons, worth \$31,863, or rather more than \$17 per ton. As the average value to the farmer was only about \$9 per ton during the same period, it will be seen that there has been a margin of \$8 left, presumably for the shipper. This seems rather a wide margin between producer and shipper, and may bear further investigation.

"While we exported only 35,200 tons of hay last year, with a crop of 82,560,000 tons, yet we imported nearly 80,000 tons, showing that our own growth falls a little short of our own domestic requirements. Our average imports during eleven years have been 100,414 tons yearly, worth \$9.66 per ton, but they have decreased largely since 1890, when the \$4 per ton customs duty was imposed upon foreign hay. Our import of hay have been received almost entirely from Canada, while our exports go chief to islands in the Atlantic and Pacific, with no trade to Great Britain. Our imports and exports from 1882-92 were as follows:

Years.	Imports.		Exports.	
	Tons.	Value.	Tons.	Value.
1882.....	86,029	\$ 892,638	10,570	\$ 190,170
1883.....	97,974	954,816	13,309	261,614
1884.....	118,955	999,144	16,908	309,781
1885.....	160,950	1,517,840	11,142	204,705
1886.....	92,118	1,035,533	13,390	237,992
1887.....	78,368	790,394	13,873	218,006
1888.....	100,269	979,524	18,198	328,819
1889.....	105,395	1,082,885	21,928	388,777
1890.....	124,544	1,143,445	36,274	567,558
1891.....	58,112	445,461	28,066	470,228
1892.....	79,115	715,151	35,201	582,838
Totals....	1,104,559	\$10,524,801	220,859	\$3,760,488
Average.....	100,414	965,800	20,078	341,863

"The position of the English hay market at the moment is such that there seem to be good possibilities for hay exports in that direction during the next six months. Shipments of Canadian hay have already been made, and a letter from an agent in Bristol, Eng., states that no good hay can be bought there for less than \$33 per ton, while the writer heard a large dealer refuse an order for 100 tons at less than that figure. It is thought that good Canadian hay can sell at from \$30 to \$35 per ton in England during the fall and winter months. If good Canadian hay can sell at those figures why not good American hay also?

"The freight on hay from Boston to England varies from \$8 to \$10 per ton. From New York it ranges from \$6 to \$10, and is governed by the quantity shipped at one time and the nature of the general cargo. If the steamer has a light freight the agents will carry hay for less than if they have a good cargo, and vice versa. One New York commission firm states that our prime timothy hay is not so much in demand as an inferior grade. Be this as it may, if it pays to ship Canadian hay, via Montreal and Quebec, there may be a market for American hay, and it is certain that Boston shippers are looking into the matter, which will probably also be taken up by from New York."

L. Cortelyou, Muscotah, Kan: "I would not be without your AMERICAN ELEVATOR AND GRAIN TRADE for five times its cost."

Stocks of wheat in call-board warehouses at San Francisco, Cal., aggregated 6,954,900 bushels November 1, as against 7,633,300 bushels Nov. 1, 1891.

Shipments of hay are going forward from this province and Ontario to England, but owing to limited vessel space, shippers at this port cannot fill their orders, and some have had to fill them in Western Ontario and ship the hay via Philadelphia, where they have taken freight at 25s, against 45s to 50s asked here. Some of our shippers are complaining bitterly that although they want space so badly at this port, certain ship agents are purchasing hay and shipping it themselves. If the steamers could not get freight and had to fill the space themselves, in that event, nothing could be said against it, but when the ship agents could let their room four or five times over, and then fill it themselves to the detriment of their customers, it assumes quite a different phase, and we can understand why our shippers are feeling so aggrieved. —*Trade Bulletin, Montreal.*

THE NICARAGUA CANAL.

The canal through Nicaragua seems now quite likely to be built and controlled by citizens of the United States. The committee appointed by the National Nicaragua Canal Convention, at its meeting in St. Louis, to prepare an address to the American people giving information as to the feasibility of the Nicaragua Canal in its commercial and other advantages to the United States, says the cost including the payment of interest during the progress of the work will be less than \$100,000,000 and the time required for the completion of the work is less than five years.

The wheat crop of the Pacific coast in 1891 was over 1,800,000 tons, and of this 80 per cent. was exported by sailing vessels, a large proportion of it passing around the Horn. The Nicaragua Canal would shorten the route to Atlantic ports and save the producer the cost of transporting freight around Cape Horn. The revenue of the canal at \$2 per ton would be nearly \$3,000,000 annually on wheat alone. It will be seen by the accompanying map how commerce in all lines will be facilitated. The route for shipments from Western North America and Australia to Europe will be materially shortened by the canal. The Suez Canal saves only 3,600 miles around the Cape of Good Hope as compared with over 10,000 miles saved by the Nicaragua Canal. The following table shows the number of ships passing through, the net tonnage, and the gross receipts of the Suez Canal for the six years ending with 1891:

Year.	No. Ships.	Net Tonnage.	Gross Receipts. (Francs.)
1870.....	488	436,600	4,345,758
1875.....	1,494	2,009,984	26,430,750
1880.....	2,026	3,057,421	36,492,620
1885.....	3,624	6,335,752	60,057,259
1890.....	3,389	6,853,637	68,983,500
1891.....	4,206	8,699,020	83,421,504

The tonnage tributary now to the Nicaragua and which would pass through at its opening is computed at over 6,000,000 tons a year. At the charge of \$2 a ton made by the Suez Canal this would make an income in tolls of \$12,000,000 a year. As the cost of operation and maintenance is placed at less than \$1,000,000, the net income would be \$11,000,000. The committee is confident that in less than five years the income would be over \$20,000,000.

Of the entire distance of 169½ miles from the Atlantic to the Pacific Ocean through Nicaragua only 26¾ miles will have to be excavated. The other 142¾ miles consists of Lake Nicaragua, the San Juan River and depressions in the surface of the earth. Lake Nicaragua will constitute a harbor 110 miles long, 60 miles wide, and the water is 250 feet at its deepest point. Vessels entering the canal from the Atlantic Ocean will sail on a level with the ocean for 12¾ miles, and then be raised by three locks to the level of the lake. They will sail along the San Juan and the lake, on the lake level, to within three miles of the Pacific coast, where they will be lowered by three locks to the level of the Pacific Ocean.

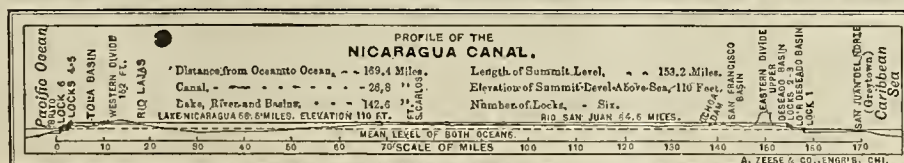
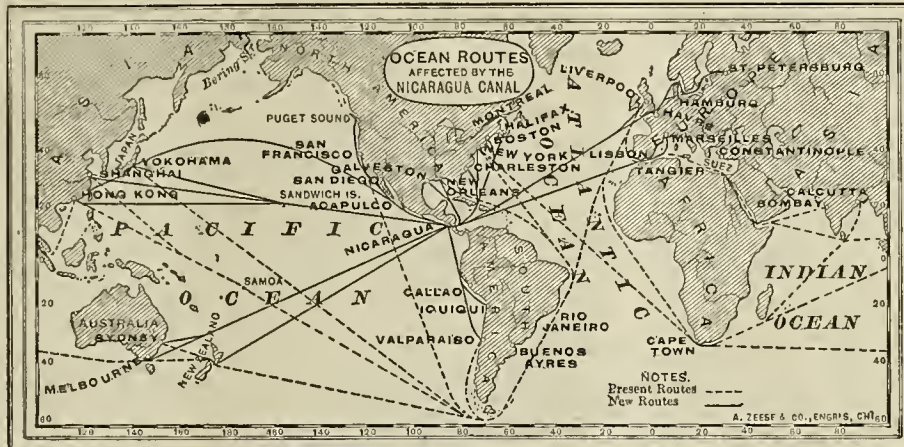
The distance saved to navigation by the canal is shown in the following table:

Between	Miles Present Route, via	Via Canal.
N. Y. and San Francisco.....	Cape Horn, 15,000	4,900
N. Y. and Puget Sound.....	Magellan, 13,935	5,665
N. Y. and Hong Kong.....	Cape C. H., 13,750	10,695
N. Y. and Melbourne.....	Cape Horn, 13,760	9,882
Liverpool and San Francisco.....	Cape Horn, 15,620	7,627
N. O. and San Francisco.....	Cape Horn, 16,000	4,147

All surveys and examination of strata requiring removal have been completed. The jetty has been constructed and the harbor of Greytown has been restored so that vessels of fourteen feet draft have an easy entrance. Extensive wharves, landing places and permanent buildings have been constructed, temporary camps erected, a telegraph line made, the canal cleared of timber for twenty miles, and a railroad twelve miles in length constructed and equipped. The biggest dredging plant

in America, that formerly used at Panama, has been purchased, and over a mile of the canal has been dredged. The exclusive franchise for the steam navigation of the San Juan River and Lake Nicaragua and an extensive plant for the Navigation Company have been acquired. The Government of Nicaragua has acknowledged that the company has complied with the canal grant, which provided that \$2,000,000 must be expended the first year. It is shown that the amount of money spent to date on the enterprise is over \$6,000,000.

Among the many beneficial results which the completion of the Nicaragua Canal will bring to the grain shippers of the Pacific coast will be a considerable saving in the manner of transportation. It is now necessary to sack all grain shipped in order to successfully weather the severe equinoctial storms off the central coast of South America, and the stormy seas of Cape Horn. Vessels passing through the canal could carry all their grain in bulk, the cost of loading and unloading would be



lessened, besides the saving in sacking. The effect of these advantages will induce many to enter into the grain industry, as the benefits from the canal will extend over the entire Pacific coast.

A BROTHER OF OPTION HATCH.

Congressman Hatch's brother is one of the big speculators in the grain pit of the Chicago Board of Trade, and he is pointed out to visitors as a brother of Anti-Option Bill Hatch. Speculator Hatch is very good natured, but yesterday he got mad for once in his life.

His fellow speculators had a habit of striking him in the back with their clinched fists as they exclaimed, "Is your name Hatch?" He is thus familiarly saluted from 1,000 to 15,000 times a day, until he thought yesterday that he detected rheumatism in his shoulders, and when Colonel Ed Partridge greeted him in the usual way Hatch's eyes flashed as he turned on Partridge and shouted: "No, d—n you. My name is Smith—John Smith, and the next man that forgets it will be knocked down. Don't forget that!" They let Hatch alone after that.

Careless advertising, except with the largest advertisers, is, unfortunately, the rule rather than the exception.

A GRAIN INSURANCE PROBLEM.

A correspondent of *Rough Notes* presents the following problem:

Company "A" issues a policy for \$15,000 under the following form (with no other insurance):

Fifteen thousand dollars on grain and grain products, while contained in the herein described warehouses.

Brick, metal roof warehouse, known as "No. 1," and warehouse of same description, known as "No. 2," and in warehouse, same description known as "No. 3," all situated detached at — and occupied as grain warehouses.

Insurance being subject to the following clauses:

AVERAGE CLAUSE.

It is mutually agreed and understood that this policy covers the property herein mentioned, in each of the above named locations, only in such a proportion of the amount hereby insured as the value of such property, in each of said locations bears to the whole value of such property, in all of the above named locations where this policy applies.

EIGHTY PER CENT. CLAUSE.

It is a part of the consideration of this policy, and the basis upon which the rate of premium is fixed, that the assured shall maintain insurance on each item of property insured by this policy of not less than 80 per cent. of the actual cash value thereof, and that, failing so to do, the assured shall be an insurer to the extent of such deficit, and in that event shall bear his, her or their proportion of any loss.

Privilege of other insurance, concurrent herewith.

Attached to Policy No of the ... Insurance Company of Agent.

This form to be attached to all policies covering all classes of risks, except dwellings, school houses and churches.

A fire occurs in Warehouse "No. 1," and the amount of the loss is agreed upon at \$2,000, and the values are fixed as follows: Warehouse "No. 1," value, \$5,000; "No. 2," \$6,000; "No. 3," \$9,000. Now the question. Mr. "H" claims that the two clauses conflict, and that the 80 per cent. co-insurance clause would be of no benefit to company. Mr. "G" agrees with Mr. "H," while Mr. "S" contends that the clauses would not conflict, that the average clause is a necessity, and that under the figures given, without the 80 per cent. co-insurance clause, Company "A" would be forced to pay the \$2,000 loss in full, while with the 80 per cent. co-insurance clause, company would only pay \$1,875, giving the company the advantage of \$125 which the assured would have to contribute under the 80 per cent. co-insurance-

clause. Please state the above proposition, application of clauses and the contribution of loss in this case, and oblige.

In reply that journal says: We have submitted the above query to several of our friends, and have been favored by a unanimous verdict by those who have responded. The verdict being in substance as follows: There is no contradiction between the above clauses, both being proper and fair, and effect should be given to such as was evidently the original intention.

The average clause is for the purpose of avoiding a blanket policy, and imparts the clear meaning and intention of a specific form, thus limiting the liability of the company in each of the several locations, and has nothing whatever to do with stipulating the amount of insurance which shall be carried. The values are respectively determined at \$5,000, \$6,000 and \$9,000 in warehouses 1, 2 and 3, or a total valuation of \$20,000.

The average clause makes the policy a specific one as follows: Three thousand seven hundred and fifty dollars on grain in warehouse No. 1, \$4,500 on grain in warehouse No. 2, and \$6,750 on grain in warehouse No. 3. The loss is \$2,000; total insurance, \$3,750; the agreed sound value is \$5,000, and the insurance required to comply with the 80 per cent. co-insurance clause (which has not been rendered inoperative by average clause), is \$4,-

500, and hence the company pays \$1,875, the assured being a co-insurer and contributing \$125.

Another method by which the same result is obtained is as follows:

First, we must divide up the \$15,000 total insurance, according to the average clause, in the different warehouses. This gives the insurance in each as follows:

In No. 1, $\frac{5}{10}$ of \$15,000, or	\$3,750
In No. 2, $\frac{4}{10}$ of " "	4,500
In No. 3, $\frac{2}{10}$ of " "	6,750
	\$15,000

Now, applying the co-insurance clause we find 80 per cent. of the \$5,000 value in No. 1 is \$4,000, on which there is only \$3,750 insurance, so that assured contributes with the \$250 deficit in the apportionment of the loss, making the

Insurance company pay $\frac{3750}{4000}$ of the \$2,000 loss, or \$1,875
Assured bears $\frac{250}{4000}$ " " " " 125

\$2,000

SHORTAGES IN GRAIN TRANSPORTATION.

In an article on the proper method of handling bulk shipments, the *Railway Review* says, in the interests of the railroads, on the bill of lading question:

"The receipt given by the carrier, ordinarily called a bill of lading, is not conclusive of the fact which it recites, at best. It may be rebutted or denied, or qualified or explained. It is evidence of the fact which it recites only so far as those facts are true, and it has happened that bills of lading have been given for goods which actually had not been received, and the fact that the company had signed a receipt for them did not and could not prevent it from showing that the goods in fact were never delivered.

"It is a question of fact, and purely a question of fact, whether goods are delivered to a common carrier or not, and what amount of goods are delivered. This may be proved by the receipt or bill of lading if that document correctly recites the amount of the shipment; but if it does not recite the amount of the shipment correctly, then either party may show by other testimony what the actual shipment was. The receipt or bill of lading is merely *prima facie* evidence of the transaction, and is only evidence for what it is worth. It will not prevent the introduction of other evidence to contradict it, and if it is incorrect, it is simply valueless and cuts no figure in the transaction. Inasmuch as it is futile for the railway company to attempt to escape any of the liabilities of a common carrier by the ambiguous wording of its bill of lading, it would seem to be the better policy to make the bill of lading conform strictly to the facts, and relieve the carrier from the imputation of attempting to evade his liability.

"If the bill of lading correctly recited the exact amount of grain weighed in, and the grain was then weighed out at the other end, and the carrier was responsible for the difference in weight, it is highly probable that there would be much less difference between the loading and out-turn weights. Under such circumstances a business system would be applied to what is now conducted on a decidedly haphazard plan. The weights at the elevator at the point of shipment would be verified and checked by the carrier's representative, while the weights at destination would be so guarded as to admit of little opportunity for error or dispute. Under the present system the railway company is entirely at the mercy of the local shipper, who, if he operates an elevator, strives to make his house 'weigh out,' and is therefore not likely to give the railway company any the best of the weight; while when the shipment reaches the terminal point, it is weighed out by the storage or transfer elevator, or track buyer, all of whom are interested in obtaining as full a weight as possible. It is well known that in railroad yards where cars stand waiting in transit there is a greater or less amount of shrinkage, resulting from the predatory proclivities of various residents along the line. Taking these three elements into consideration, there is not, as the situation exists to-day, a very roseate outlook for the railroad company which attempts to stand good for the loss between the weight given by the elevator at the point of shipment and the result at the scales at the point of receipt, or to the shipper when such is not the case.

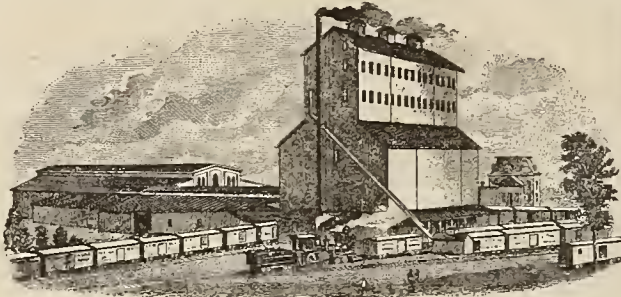
"These things should be corrected. There should be a system of checking which would make the weights at the country elevator correct; there should be a police

system which would insure those weights in transit, and there should be some system which would guarantee proper weighing at the point of receipt."

THE NASHVILLE ELEVATOR COMPANY.

The Nashville Warehouse and Elevator Company was organized at Nashville, Tenn., in 1875. Although the business of the company consisted at first solely in the handling of cotton, they soon erected an elevator for dealing in grain, and in 1890 added to their general business of cotton, grain, hay, feed and general storage, the handling of agricultural implements, and are at present doing a transfer business for a number of manufacturers of such goods. Tennessee is one of the best wheat states in the South, and Nashville affords an excellent center for the distribution of products.

The company's plant, an illustration of which is given herewith, is so situated that it is able to handle cars from every road direct from their sidings, thus making no charge for switching, and greatly facilitating the handling of their extensive business. The company has now a capital of \$150,000, and ranks among the first, as a business industry, in the community in which they are situated. Their property extends over about six acres of ground, four of which are under roof, making a capacity comparatively unlimited. Large quantities of grain are handled by them in the course of the year. The company has ample resources both in men and capital for the carrying on of its industry in the best manner possible.



ELEVATOR AT NASHVILLE, TENN.

Wm. M. McCarthy, superintendent and treasurer, is a man of strong business qualifications and excellent executive ability. He has been closely connected with the interests of the house since its organization. The greater part of his life has been spent at Nashville, and he has always borne the reputation of a man of shrewd judgment and sound commercial principles.

SECURING ELEVATOR SITES IN MANITOBA.

The manner in which those who wish to build independent elevators in Manitoba are treated by the railway companies is provoking a good deal of hard feeling there. The farmers around Rosebank, on the Northern Pacific, had subscribed sufficient stock to build a very handsome elevator at that point and when they came to make terms with the company they found that the only terms upon which they could obtain a half acre of land worth five dollars and a switch, was by a lease for five years with a cancellation clause which provides that they may at any time, on giving thirty days' notice, demand the land, and if in that time the elevator be not removed it becomes the property of the company. These terms were not accepted by the farmers' company, and the Northern Pacific Railroad are out to the tune of from 125,000 to 150,000 bushels of freight, as the farmers will team it across country to the Canadian Pacific Railroad points where there are farmers' elevators. The only apparent reason we can give for this is that the railway company is following this course with a view to helping the well organized rings of grain buyers in Winnipeg.—*Canadian Miller*.

We always thought the editor of the *Canadian Miller* was a farmer; now we know it. He should go to Manitoba and learn a few facts about the business. The knowledge of the severe competition existing there would rid him of his prejudice against the class of men known as grain dealers.

Four million bushels of corn will have been shipped into Mexico before the present movement is over, say American railroad men. One-half this quantity has already crossed the line.

ELEVATOR CAPACITY OF MINNEAPOLIS.

During the past year about 2,000,000 bushels of elevator storage has been built in Minneapolis, says the *Northwestern Miller*. In most cases the new houses have consisted of annexes, put up by companies which already operated terminal plants. The companies that have added to their capacities are: Great Western Elevator Company 500,000 bushels, Midway Elevator Company 225,000, Interior Elevator Company 500,000, Empire Elevator Company 500,000, City Elevator Company 250,000, Interstate Grain Company 200,000. One 200,000-bushel annex, belonging to the Milwaukee road, has been pulled down. All but nine of the houses are recognized by the Chamber of Commerce as "regular," the rest coming under the head of "private." It is the regular houses that have gained mainly by the erection of new buildings, the aggregate of private houses being left practically the same as a year ago. The total elevator storage is 18,180,000 bushels, and the storage connected with the mills swells the amount to 19,410,000 bushels.

The appended table shows the storage in detail:

PUBLIC HOUSES.		Bushels.
A 2.....	Terminal Ele. Co.....	1,200,000
St. Anthony 1*.....	St. Anthony Ele. Co.....	1,500,000
Transfer*.....	Northwestern Ele. Co.....	600,000
Transfer Annex.....	Northwestern Ele. Co.....	400,000
Interior No. 1*.....	Northwestern Ele. Co.....	100,000
Interior No. 1*.....	Interior Ele. Co.....	1,250,000
Interior No. 1 Annex.....	Terminal Ele. Co.....	500,000
Star.....	Star Elevator Co.....	500,000
Star Annex No. 1.....	Star Elevator Co.....	500,000
Star Annex No. 2.....	Star Elevator Co.....	800,000
B.....	C. M. & St. P. Ry.....	900,000
E Annex.....	C. M. & St. P. Ry.....	200,000
Union*.....	Union Elevator Co.....	1,600,000
Union Annex B.....	Union Elevator Co.....	500,000
Union Annex A.....	Union Elevator Co.....	200,000
Central.....	F. H. Peavey & Co.....	300,000
E.....	Sowle Elevator Co.....	175,000
Martin.....	N. Dakota Elevator Co.....	225,000
K.....	E. P. Bacon.....	120,000
K Annex.....	E. P. Bacon.....	280,000
Interstate.....	Interstate Grain Co.....	500,000
Midway.....	Midway Elevator Co.....	400,000
R.....	Victoria Elevator Co.....	300,000
B, Como Avenue.....	Great Northern Ry.....	1,000,000
Great Western.....	Great Western Ele. Co.....	500,000
Total.....		14,550,000

*Have state licenses.

PRIVATE HOUSES.		
A 1.....	Terminal Elevator Co.....	800,000
Interior No. 2.....	Interior Elevator Co.....	250,000
St. Anthony No. 2.....	St. Anthony Elevator Co.....	300,000
Atlantic.....	Atlantic Elevator Co.....	600,000
C.....	Empire Elevator Co.....	500,000
Pillsbury.....	C. A. Pillsbury & Co.....	600,000
City.....	City Elevator Co.....	130,000
New Brighton.....	City Elevator Co.....	300,000
X.....	Geo. C. Bagley.....	150,000

Total bushels..... 3,630,000

RECAPITULATION.

Regular houses.....	14,550,000
Private houses.....	3,630,000

Total..... 18,180,000
Storage in mills..... 1,230,000

Grand total..... 19,410,000

MEETING OF POSSUM HOLLER BOARD OF TRADE.

The board of trade met last Thursday night to investigate why wheat will not bring more than 65 cents per bushel. It was unanimously decided that the cause of the low price is because there is so much wheat. If there wasn't so much of it it would be worth more per bushel. It was also decided to petition Congress to raise the duty to one dollar a bushel so as to keep out the pauper wheat from Greenland, Iceland, Madagascar and the Sahara Desert. Agriculture must be looked after more than it has been or our millionaires will lack for spring chickens.

An American inventor has recently produced a machine for utilizing the waste product of the flax plant, by which a good quality of linen is produced. If practical, as now appears, the new invention means a great deal, as at present we are paying \$30,000,000 annually to foreign countries for the linen, which by the new process can be made in this country. American ingenuity is rapidly developing industries in this country that have heretofore been next to impossible.—*Western Merchant and Manufacturer*.

SOUTH AMERICAN BREADSTUFFS.

The rapidly growing importance of Latin America, and more especially the Argentine Republic, as a producer of breadstuffs, is strikingly illustrated by the publication of the American Bureau of Republics, one of the results of the Pan-American Congress. A recent bulletin of the bureau contains a mass of figures and facts in relation to the breadstuffs trade of Latin America, in many cases brought up to the year 1892. It exhibits the wonderful development of cereal agriculture in the Argentine Republic, which, with its extreme fertility and climate favorable in the extreme to agricultural production may be expected to develop even more rapidly with the introduction of modern appliances and increased population to till the soil. In 1888 the amount of land under cultivation in the entire Republic, according to the official figures, was less than one per cent. of the 715,210,080 acres, the total area of the country. It is stated that wheat, maize, barley, rye, and oats can be grown in all the departments of the Republic from Patagonia to Bolivia, and from the Andes to La Plata, the districts which, from lack of rain and saline properties in the soil, are not adapted for agriculture, being comparatively insignificant.

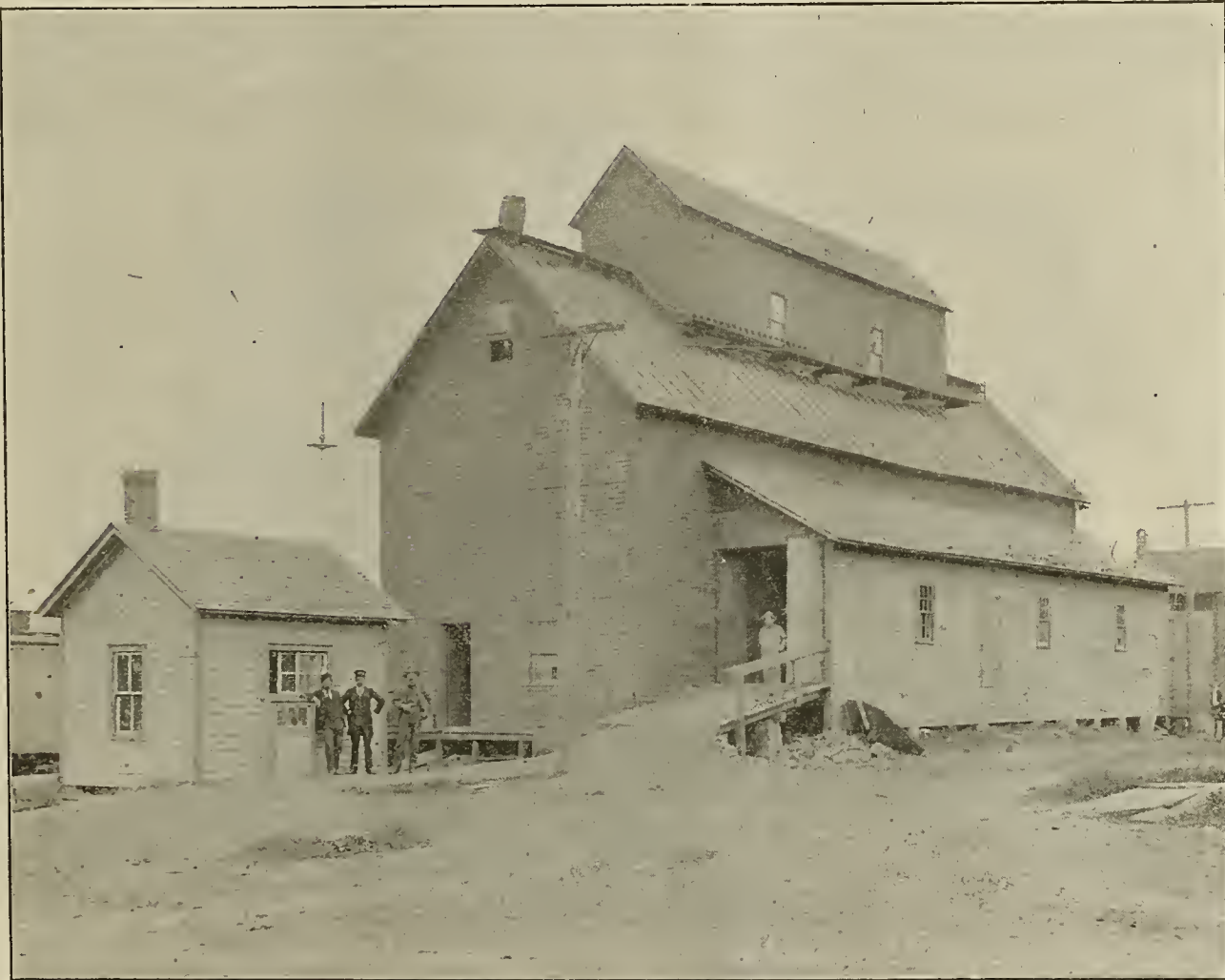
Prior to 1890 La Plata was an importer of wheat for home consumption, and even up to 1878 its production was sufficient only for the home demand, but the immigration from Europe rapidly extended the cultivation of cereals, until 1885 the surplus above her own requirements amounted to 100,000 tons, while the yield of wheat available for export for 1890-91 is estimated at 390,000 tons. The development of maize growing has likewise rapidly extended; the exports in 1877 of this cereal were 10,000 tons, in 1886 they had increased to 230,000 tons, while the estimated probable yield for 1890-91 is placed at 1,000,000 tons, of which 500,000 tons were available for export. In a comparison of the exports of cereals the large increase in the year 1890 is very noticeable, over those of the two preceding years. In 1888, of wheat there were exported 178,928 tons, flour 6,392 tons, and maize 162,037 tons, a considerable decrease from those of the former year, caused by a series of heavy rains, which, with the exception of corn, caused almost a total failure in the crops. This resulted in a decrease in the export, and in 1889 the Argentine could only spare 22,806 tons of wheat, 3,360 tons of flour, 432,590 tons of maize, and other breadstuffs, bran, barley and biscuits to the value of \$96,468. Of these the great portion of the wheat was taken by Uruguay, Paraguay, Brazil and Great Britain in the order named, the latter also taking the largest part of the maize, with Brazil coming second, France third, Italy fourth, Belgium fifth, Germany sixth and Spain seventh. The largest export of flour went to Uruguay, but Brazil and Paraguay were also large buyers.

The milling industry is also assuming large proportions. In the city of Buenos Ayres there are 23 steam flour mills fitted up with the most modern improvements, as well as five establishments where crackers are manufactured. In former years the Argentine was an importer of breadstuffs from the United States, and in 1890 she purchased to the value of \$72,401, but in 1891, the imports of all breadstuffs from that country have been reduced to the insignificant sum of \$204.

In regard to Bolivia no statistics appear to have been officially collated; hence it is almost impossible to ascertain the acreage under cereals, or the yields harvested. The valleys and lowlands in the east are very fertile, but

unless a better system of cultivation is introduced, it will be some time before the production of this Republic is increased to any great extent. The Department of Cochabamba, until within a few years, has produced sufficient flour for the consumption of the country and an inconsiderable amount of export of flour, not exceeding in value \$150, from the United States helps to supply what deficiency there may be.

The provinces of Southern Brazil as early as 1805 were important wheat growing districts, and in the present state of Rio Grande do Sul wheat was extensively grown and exported until about 1820, but a general failure of crops caused its cultivation to be generally given up. In the northern states droughts and lack of facilities for transportation stand in the way of increased development. In the Amazon valley the climate is not suitable for the growth of wheat, barley, oats and rye, for although the growth is rank, no grain is produced, and it would appear that a comparatively small area of the country is adapted to wheat growing. Maize is one of the chief crops, but there would seem to be none available for export. The bounties offered by the government for agricultural products are expected to encourage an increased growth



J. S. ROWE'S ELEVATOR AT WILTON, IA.

of wheat. The state of Rio Grande do Sul already raises sufficient to supply the half of its consumption, and the success of wheat growing in Uruguay combined with the large importations of flour from Monte Video are having the effect of again attracting attention to wheat growing.

Up till within a few years milling was practically unknown in Brazil, nearly the whole of the flour being imported until the establishment of two milling companies at Rio Janeiro, who import wheat from the River Platte, the United States, Europe and other countries.

The total importations of flour into Rio amounted in 1888 to 389,114 barrels and in 1889 to 377,833 barrels, or 11,281 barrels less than the previous year, notwithstanding the increased consumption. The flour imports from the United States in 1888, according to the American Consul at Rio Grande do Sul, declined over 3,306,000 pounds, as compared with those of 1887, and as the importation from Austria, Chili, the Argentine and Uruguay also fell away the decrease is attributed to the flour output from the Rio Janeiro mills. The decrease in the exportation of breadstuffs from the United States to Brazil for 1891 also shows a decline; in 1889 the total value amounted to \$4,103,051, which in 1890 increased to \$4,973,656, but in 1891 fell to \$4,386,121.—*London Financial Times*.

ELEVATOR AT WILTON, IA.

In one of the best grain growing districts in the eastern part of the greatest corn producing state is Wilton Junction, a country station, which has always been famous with the producers on account of the high prices paid for grain by its buyers throughout the year. When roads are good farmers frequently haul grain long distances and from near neighboring markets to get Wilton prices.

J. S. Rowe's elevator at Wilton, Ia., is shown in the illustration. The elevator, a frame building with tin roof, stands on a solid stone foundation, adjoining the Rock Island tracks. The building is 24x100 feet and 75 feet high. Its 26 bins have a capacity of 30,000 bushels. The dump house, which is approached by a slightly inclined slated roadway, is 9x12 feet and contains two patent dumps, each of which has two receiving sinks, one being for barley and oats, one for wheat and rye. The dumps can receive fifteen wagon loads of grain per hour. The elevator contains one Racine Mill, manufactured by Johnson & Field Company of Racine, Wis., one American Grain Cleaner, one hopper scale of 60 bushels and two receiving hopper scales, each of 75 bushels' capacity. The hopper shipping scale is on wheels on an iron track and can be run from one end of the elevator to the other, to be used in weighing grain from any bin into the car. There are thirteen shipping spouts, one from each bin, on the south side of the house, and two elevator legs, with buckets, 9x15, thirteen inches apart. On the first floor are two switches with rods extending to elevator heads so that grain can be sent by either to any one of twelve bins by operation on the first floor without going to the top of the building. The feed mill is used in grinding all kinds of feed, including rye meal and Graham flour. The sweep horse power now used is soon to be replaced by a gas engine. The corn cribs are also on the first floor and a new corn sheller will soon be put in. The elevator is well provided with power transmitting machinery. The office is situated to the east of the

elevator and is provided with a platform wagon scale.

Mr. Rowe, the proprietor of the elevator, is a young man, who has been long associated with the grain trade of that district, having formerly operated houses at Atalissa and Tipton in connection with his Wilton house. He has always successfully competed with the merchants of neighboring grain centers, to which fact his large shipments give ample testimony. The foreman of the elevator is Mr. J. A. Barton, whose long experience in the grain business makes him a valued assistant.

A Chicago elevator collapsed under the weight of wheat Saturday. The chances are that Kansas grain did it. It would be well for all elevator owners who expect to handle the Sunflower state's wheat this year to put in extra supports at once.—*Kansas City Star*.

The first wheat raised in the new world was sown on the Island of Isabella in January, 1494, and on March 30 the ears were gathered. The foundation of the great wheat industry of Mexico is said to have been three grains carried into that country by one of the slaves of the Cortez Company. The first crop of wheat raised in South America was sown by a monk in the garden of a convent at Quito. Garcillaz affirms that up to 1658 wheaten bread had never been used as an article of diet by the people of Peru.

HANDLING CANADIAN GRAIN IN BOND.

A general meeting of the Winnipeg Grain Exchange was held November 2 and considered the correspondence from the trunk lines of railways running into New York re the naming of the three grades of wheat, which number only will be handled by the United States roads through that seaport for export. After considering the grades of which the largest percentage are now being returned by the grain inspector, it was decided that Nos. 1, 2 and 3 Hard would be selected.

The question of shipping all goods through Halifax was discussed at some length, and the Canadian Pacific Railroad officials present at the meeting agreed to refer the matter to the general offices in Montreal for consideration.

The following is the circular issued by the freight department of the Trunk Line Association in regard to grain shipments:

AGREEMENT FOR GRADING CANADIAN GRAIN IN BOND.

Taking effect Tuesday, Nov. 1, 1892, the following rules will govern upon all shipments of grain from Canada exported via the port of New York:

First.—All grain from Canada exported via the port of New York will be handled according to grades established by the Boards of Trade of Winnipeg, Toronto and Montreal, and grain so graded will be placed in bonded bins of the elevators and boats of the trunk lines at New York with other Canadian grain of like quality and grade as per the duplicate certificate of the government inspector of the Dominion of Canada.

Second.—The maximum number of grades which can be accommodated in the bonded bins of the elevators and boats of the trunk lines at New York is fifteen; said grades will be fixed by the Boards of Trade of Winnipeg, Montreal and Toronto in accordance with the agreement reached at conference of Oct. 20, 1892, viz.:

Manitoba wheat, three grades; Ontario wheat, four grades; Ontario rye, one grade; Ontario oats, two grades; Ontario barley, two grades; Ontario peas, one grade; Ontario black-eyed peas, one grade; Ontario buckwheat, one grade. Grain from the Province of Quebec will be placed in the same bins or boats as grain from the Province of Ontario.

Third.—No Canadian grain for export via New York will be accepted by the trunk lines on through foreign bills of lading, but such shipments must be consigned to the care of an individual or firm located at that port, whose address must be given in each instance.

Fourth.—Manitoba grain will be inspected and graded before being forwarded from Winnipeg on the Canadian Pacific Railway or Emerson on the Northern Pacific Railroad, and a duplicate certificate of grade from the Canadian Government inspectors attached to the waybills.

Fifth.—Grain from the Provinces of Quebec and Ontario will be inspected and graded in Canada before passing the frontier and the cars will be turned over to the trunk lines with duplicate certificates of the grade from the Canadian Government inspectors attached to the waybills.

Sixth.—Grain so arriving at New York will be placed in the grades established by the Canadian Boards of Trade and certified by the government inspectors of the Dominion of Canada, subject to the same storage and handling charges as domestic grain, as per the agreement between the New York Produce Exchange and the trunk lines.

It is understood that the same rules will govern on shipments of Canadian grain for export via all other sea-

ports when handled by the railroad companies members of the Trunk Line Association.

At a special meeting of the Montreal Corn Exchange the following letter was read from Mr. George Olds, traffic manager of the Canadian Pacific Railway Company:

"The question of grading Canadian grain intended for exportation via New York and Boston having apparently been satisfactorily settled at the meeting held in New York on Thursday last, and the practical closing of navigation being near at hand, it seems necessary for us to announce to the trade what arrangements it is proposed to make for the forwarding and handling of grain. As you are aware three grades of Manitoba wheat has been agreed upon as the number of grades which the New York terminal lines will take care of, and Boston no doubt will take care of a like number of grades of this grain. So far as Manitoba wheat is concerned, for the present all that which may be intended for export via New York will pass from our line via Prescott, Ont. That for export via Boston will necessarily pass in the vicinity of Montreal, but as the inspection of Manitoba wheat is to be made at Winnipeg, and as inspectors' certificates are to accompany each consignment, it will not be necessary for the inspectors of grain at the frontier to interfere in any way with this grain. With regard to grain from points in Ontario, that which may leave our

A RELIABLE STEAM POWER OUT-FIT FOR GRAIN ELEVATORS.

The engine and boiler represented in the accompanying illustration is built by that well-known manufacturing firm, James Leffel & Co., Springfield, O. Thirty years' continuous business devoted exclusively to the building of steam engines and boilers, and the James Leffel Turbine Water Wheels has given this firm an established reputation and record for good honest work and satisfactory service unsurpassed.

Their horizontal engine, shown in accompanying cut, is of the center crank pattern, carefully designed with regard to form and proper distribution of metal as to secure greatest strength and durability and highest symmetry of parts. The main bed or frame is cast in one piece, including guides for cross head and extra large babbitted bearings for main shaft. The cylinder is cast separately of selected metal and firmly bolted to end of main frame. The crank shaft is of solid steel, of extra tough and homogeneous quality and counterbalanced. The cross head is of superior mechanical design and fitted with composition slides above and below, each adjustable with gib bolts, affording specially convenient arrangement for taking up wear. Extra care is bestowed on piston, which is provided with self adjusting metallic rings, after the most approved practice.

The governor is of the best make, with speed adjuster, sawyer's lever, and automatic safety stop. Each engine is carefully run and tested under steam before leaving factory.

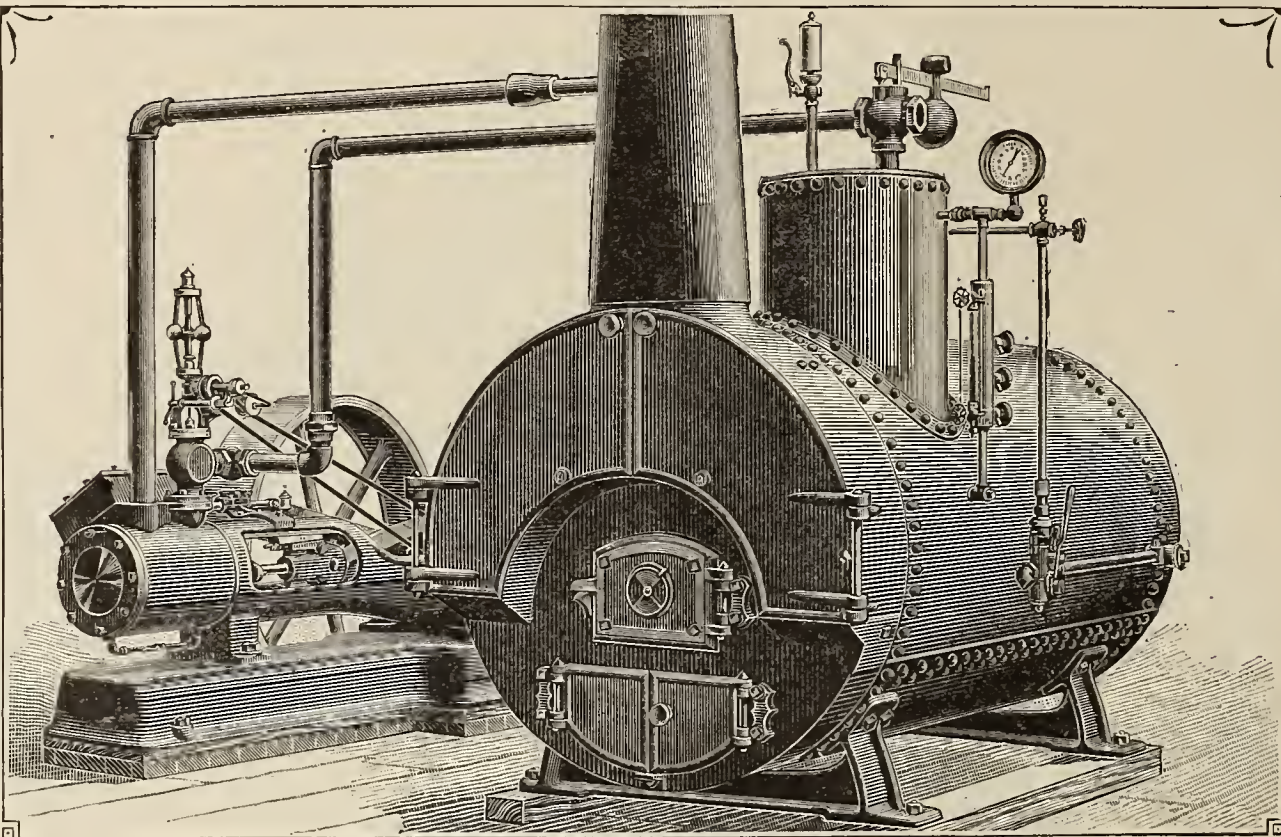
As will be seen, the boiler is of the Cornish Return Tubular pattern, same style as is almost universally used on ocean steamers, which is a positive guarantee of their safety and efficiency. It is thoroughly well built throughout of open hearth homogeneous steel plate of 60,000 pounds tensile strength, and furnished with best quality lap-welded tubes. The firebox consists of large cylindrical flue extending full length of boiler, encased within the outside shell, and surrounded with water. In the front and of same is placed the grates or furnace proper,

with bridge wall at back end of grates, beyond which is a combustion chamber leading to tubes through which the flames and heated gases are returned to fire front end, and pass into stack, after having traversed full length of boiler twice. The opening of fire door does not expose the ends of tubes to the inrush of cold air, so detrimental in some other styles of portable boilers. The smoke bonnet is provided with double hinged doors, affording convenient and direct access to flues for cleaning or examination. These boilers are not only very compact, but also economical in the use of fuel, and specially free from sparks. Each boiler is thoroughly tested under cold water pressure, also under full steam pressure before being sent out.

This company also builds a splendid line of small upright engines with submerged tubular steel boilers. An illustrated pamphlet, giving description in detail with any further information desired, cheerfully furnished on application to James Leffel & Co., Springfield, O., U. S. A., or No. 110 Liberty street, New York City, U. S. A.

Merchandise valued at \$854,621,894 was imported in the twelve months preceding October 1, against \$824,716,842 and \$813,469,301 worth in the corresponding periods of 1890-91 and 1889-90 respectively.

Merchandise valued at \$998,264,674 was exported in the twelve months preceding October 1, against \$923,362,015 and \$860,177,115 worth exported in the corresponding periods of 1890-91 and 1889-90 respectively.



A RELIABLE STEAM POWER OUTFIT FOR GRAIN ELEVATORS.

line at Prescott for New York, can be inspected at Prescott, where an inspector should be located. That for export via Boston will be accumulated into train loads at our Outremont yards here, and that is the place where the inspector should be located. Arrangements will, no doubt, be made for the necessary accommodation of the inspector at Outremont yard. The question which seems to remain now for your attention is the appointment of a competent inspector to take care of the interests of the grain shippers. We shall necessarily have to refuse to forward grain to the ports of New York or Boston until it has been inspected, and instructions will be given to our several general freight agents to prohibit the forwarding of grain to Boston or New York intended for export unless it is consigned to the care of some one at either of those ports, who will have the authority, if necessary, to order the disposal of the grain in case terminal line agents should from any cause be unable to bulk any particular consignment. I think this precaution is necessary, and as much in the interests of the owner of the grain as of the railway companies. I wish to call particular attention to the danger of shippers of grain sending consignments of grain simply to the order of some Canadian bank or individual having no business location at the ports of export. This feature caused great confusion last year, and largely resulted in all the loss and detention to our cars which occurred."

Minneapolis insurance agents are, it is said, cutting rates on grain risks throughout the Northwest.

OBSERVATIONS ON THE GRAIN TRADE OF KANSAS CITY.

BY W. A. E., KANSAS CITY.

Kansas City grain men believe that an impetus will be given the grain trade here by the agreement entered into November 1 between the Western Weighing Association and the Commercial Exchange of Kansas City. By the terms of this agreement all grain hereafter entering this market will be weighed by the Western Weighing Association. This will give uniformity, a desideratum long desired, and cannot but prove beneficial to both shippers and grain men. For a long time the country shippers of the territory contiguous to Kansas City have been fighting for a betterment of the prevailing system of weighing grain in and out, and the new arrangement seems to have solved what at one time was looked upon as the most serious problems confronting the grain men here.

Under the new plan the Western Weighing Association will weigh grain into Kansas City, and the Commercial Exchange will weigh outgoing grain giving its certificates to Kansas City shippers. This new method, giving as it does, the incoming grain to disinterested parties to weigh guarantees fair treatment to the shipper and silences the cry of unjust discrimination in the matter of losses in transit. Farmers and grain shippers throughout Kansas and Nebraska are especially interested in noting the workings of this agreement, and no recent movement in this market has created the widespread comment which has been excited by it. It may not work well, and again it may stop altogether the provoking and at times enormously heavy losses in transit which at one time created a widespread belief among the farmers and country grain shippers that they were being given some sort of a hard deal.

Observant dealers in grain who have noted the recent significant movements in the Western grain markets must agree that for the next six months at least Kansas City will occupy a most favorable position. While the grain blockades at Eastern and Northern points have been growing worse instead of better, this market has been clearing, and at the time when it should be ready to do the business of an increased tributary territory, it finds itself with decks cleared and ready for action. It is now clearing its grain for the seaboard. For the next half year it can have no competitor in the work of gathering and shipping the wheat of Kansas and Nebraska to the seaboard and thence to Europe. The grain movement has turned Southward, the natural course for it to take under present conditions, and Kansas City finds itself without a rival in this particular feature of the Western trade. Chicago has contended vigorously for Kansas and Nebraska grain for the last three months, but with lake navigation closed it will be practically impossible for it to get grain from territory tributary to Kansas City. It costs so much more to ship by rail from Chicago to the seaboard than by lake, that the closing of lake navigation means the retirement of Chicago as a winter competitor of Kansas City. St. Louis is hampered by a low stage of water, so that the Western winter grain trade to the South must come to Kansas City by virtue of the conditions affecting shipments, and the fact that it has the only open route to the sea and to the European market.

The difficulties in shipping to New Orleans encountered last year have all been solved. The hitberto vexatious transfer system at Memphis which caused immense losses has been done away with by the completion of the Memphis bridge. Another source of delay and loss has been obviated by the increased compacity at New Orleans for loading wheat into vessels. So that all things considered Kansas City feels that it has a decided advantage over all other points in competing for the Southern seaboard shipments.

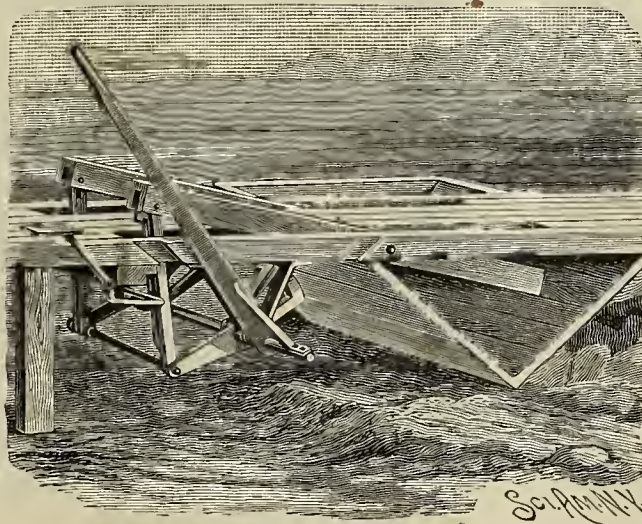
The immense crop yields in the territory directly tributary to Kansas City have made a phenomenal increase in the receipts and a corresponding activity in the market at this point. The seventeen elevators which are in operation here are running full time, but the storage room needed for the grain that could be marketed here is entirely inadequate. It was thought that before the opening of this season's trade 20 elevators would be in operation and that this number would furnish ample storage facilities. The importance of this city as a grain trade center is beginning to be appreciated. There are seventeen elevators running full time and three elevators in course of construction, but all if completed would not be able to furnish sufficient storage capacity.

The grain receipts of this market have been unpre-

cedented this year. An estimate for the season based upon the amount handled to date would indicate that at least 35,000,000 bushels of wheat will be handled here. The October receipts of wheat were within 600 cars of the August receipts deemed phenomenal. The aggregate car lots of wheat received in the first four months of the crop year is 24,371 cars, equal to 15,841,000 bushels. If there should be included in this total the wheat passing through to other markets the total four months' receipts would be more than 20,000,000 bushels. The following is the summary of the amount of grain received at this market for the month of October, estimating by carload lots: Wheat 7,348 cars; corn 889 cars; oats 286 cars; rye 230 cars.

Advices from Northwestern Kansas state that about half the wheat is still in the hands of the farmers. Country elevators are full and cars are scarce except at competitive points. Farmers throughout Kansas and Nebraska are complaining bitterly because of the discrimination exercised against them by the railroads. They claim that residents of non-competing points are estopped from shipping because of the action of the railroads in first taking care of the grain at competing points, thereby compelling them to hold their grain whether they want to or not.

Kansas City's eighteenth elevator was completed on November 1, and it began business the day following. It is the Hayward & Co. elevator, and is located in Rosedale just outside the city limits. The storage capacity of the new elevator is 100,000 bushels, and the daily handling



AN IMPROVED GRAIN DUMP.

and cleaning capacity is 50,000 bushels. The building is one of the largest of its kind in the Kaw valley and is so arranged that it can handle more grain with less men than any other elevator ever built.

SIOUX CITY AS A GRAIN MARKET.

Amerland and others say all outside towns have one to ten elevators; Sioux City, none. To-day, writes G. Y. Bonus, there is right here in Sioux City elevator capacity of 300,000 bushels, and a market every day in the year for the flax, oats, corn and wheat, two cents per bushel more than a shipper could pay. These are cold facts which are pleasanter to read than falsehood.

The Midland, Iowa, Elevator Company, the J. Q. Adams Elevator Company and many independent elevator owners ship grain to Sioux City market in preference to Minneapolis or Chicago.

Being somewhat interested in making Sioux City a grain center, we notice that the City mills, the linseed mills, the oatmeal mills and Martens Bros. daily have farmers from Kingsley, Elk Point and from many Nebraska points unloading grain, to say nothing about the feed dealers, the liverymen and the Bonus-Milner Mill Company.

It is true three cars of the cargo of the Castalia were shipped to Minneapolis; the owners of the grain and the millers could not see alike. One car went rejected. You need not fear any more will be shipped there by an experienced grain man.

When men say sometimes that grain cannot be sold less freight to Minneapolis or Chicago they are simply talking about something they know nothing about. Their sphere is inside the horizon that covers their line of trade. The talk of late in the newspapers by men who ought to know more of the facts about Sioux City as a grain market is untruthful, misleading and certainly injurious to the city.

AN IMPROVED GRAIN DUMP.

An improved grain dump has been patented by Mr. John P. Peterson, a grain merchant of Worthington, Minn. The illustration represents it in position for depositing the load. It can be built in scales, and by its use the heaviest load can be dumped with the greatest ease and without any jar to the wagon or scales. It is self-locking, so that it is impossible to drive off of it without locking it, which renders it safe at all times. It can be operated as quickly as the old style dumps and cannot become clogged from any foreign matter, either wet or dry, that is likely to accumulate around it.

The dump is a simple, durable and inexpensive structure and so built that the pit, to receive the grain, need not be sunk into the ground, or may be sunk only a slight distance. In the platform, which is mounted upon standards or other supports at any desired height from the ground, and about the distance apart of ordinary wagon wheels, are lengthwise openings in each of which a dump timber is pivoted.

Beneath the platform are brackets in which a shaft is journaled. Under the rear ends of the dump timbers and extending downward and rearward from this shaft are arms connected by a cross rod, the latter being pivotally connected by upwardly extending bars with the dump timbers. Latch links from the cross rod extend upward through the platform, these links being adapted to enter recesses by which the dump timbers are held in horizontal position. The connecting rods, links and dump timbers are practically counterbalanced by counterpoise weights on the shaft, from one end of which a lever extends up within a guard yoke on the edge of the platform. The lever is designed to engage oppositely inclined recesses in the side of the platform, the dump timbers being closed or in their horizontal position when the lever is in the rear recess, and elevated when the lever is in the forward recess. A spring bears against the outer face of the lever and holds it in position. Before the dump timbers can be elevated, after the wagon is upon the platform, the latch links must be released. This is effected by a lever which has a foot plate on its upper end. The hand lever then is operated to incline the dump timbers and the wagon, so that the contents of the latter will be deposited in the hopper.

CHANGE IN ILLINOIS INSPECTION RULES ORDERED.

At a meeting of the Board of Railroad and Warehouse Commissioners held Oct. 18, 1892, it was

ORDERED, That Rule 2 establishing grades of spring wheat for the Inspection Department of the City of Chicago, be, and the same is hereby amended by striking out the grades of No. 1 and No. 2 hard spring wheat.

ORDERED, That said Rule 2 be, and the same is hereby further amended by inserting therein the following:

No. 1 Northern Spring Wheat must be Northern grown spring wheat, sound and well cleaned, and must contain not less than 50 per cent. of the hard varieties of spring wheat.

ORDERED FURTHER: That Rule 7 of the rules establishing grades for said department be and the same is hereby amended so as to read as follows:

'Rule 7—The word 'new' shall be inserted in each certificate of inspection of a newly harvested crop of oats until the fifteenth day of August; of rye until the first day of September; of wheat until the first day of November; and of barley until the first day of May of each year.

"This change shall be construed as establishing new grades for the time specified, to conform to the existing grades of grain in all particulars, excepting the distinctions hereby established between the new and the old crop, and shall apply to grain inspected from store for two months after the times respectively above specified."

ORDERED, that these amendments take effect on and after the fourteenth day of November, A. D. 1892.

The country press is commenting favorably on the policy of the Northern Pacific road in supplying cars to all parties applying for them, to ship wheat in, without regard to their proprietary interest in elevators. On some lines there are more shipments by farmers and on others less, as the reasons for such diversion are not so great, owing to the dryer character of the wheat. The wet grain last year was responsible for most of the difficulties then.—*Minneapolis Market Record*.

SMUT IN MANITOBA WHEAT.

Those who had anything to do with the wheat crop of last year in Manitoba will have had considerable experience with smut, says the *Commercial* of Winnipeg. Anything like the proportion of smutty wheat was never experienced before here. It was impossible to handle any quantity of wheat without getting more or less smutty stuff. Last year's crop was a defective one all around, and the prevalence of smut was one of its worst characteristics.

Profiting by the experience of last year, most farmers were wise enough to take the precaution to treat their seed wheat with bluestone as a preventative of smut. Quite a number, however, seem to have been foolish enough to omit this operation, and as a result, there is more or less smutty wheat this year in some sections. There will, of course, be nothing like the same proportion of smutty wheat that there was last, but there is sufficient to show that there has been considerable carelessness, in spite of the warnings of last year, in neglecting to take the simple and inexpensive precautions necessary to prevent smut.

Sufficient proof has been given to satisfy the most dogged person that smut is preventable. Its presence now can be set down solely as a result of neglect to take the usual precaution to prevent it. Here, however, is an additional proof that smut can be effectually prevented.

A. Moore of the Royal Dominion Mills, Toronto, who recently made a trip of inspection through Manitoba, said on his return: "I drove over some fine fields of wheat, among them 2,300 acres on Sandison's farm, Brandon, which is one-half or more in the stook, not a heavy crop, but a very nice one. All was ripe and standing, clear of weeds or smut, excepting 100 acres, which is very smutty. All his seed was soaked in bluestone except that used in the 100 acres of smutty wheat."

This is another item added to the already thoroughly convincing proofs that smut is easily preventable. In the face of these facts, it is to be regretted that some farmers will be so foolhardy as to neglect so simple and inexpensive a remedy.

SHORTAGES IN LAKE GRAIN SHIPMENTS.

The subject of grain shortages is again occupying the attention of vessel owners, says the *Marine Record*, and the unsatisfactory rendering of the bill of lading clause, stating that "all deficiency in cargo is to be paid for by the carrier, and deducted from the freight, and any excess in the cargo to be paid for to the carrier by the consignee," has within the past few days been again ruled upon in Cleveland, in favor of the consignee, with the result, however, that an appeal from the decision was promptly taken.

Notwithstanding the apparent safeguards thrown around the shipment and delivery of grain cargoes, shipmasters are regularly being accused of barratry (for these shortage claims amount to nothing less) and owners are mulcted in a penalty for that which has no existence except in the printed or written clause contained in a bill of lading, and this too, without their knowledge or sanction, at times, of such an unjust and palpably fraudulent clause being inserted.

This feature of holding a vessel responsible for cargo which has never been put into her seems to be an evil which can only be remedied by the adoption of a more qualified bill of lading. However well the system may be found to work on railroad lines, it will always be a bone of contention in transportation by water. No doubt the through shipment method of weights and measures seemed originally to be based on the best principles of ethics, and considered equitable to all concerned, as it would be, providing the ship could always deliver the quantity said to be given her, but the contrary is invariably the case, either in a shortage or an overrun. "So the burnt child squeals," and the wail is louder at each repetition.

The alternative is, of course, open to a vessel owner, of not accepting cargo under such an arbitrary bill of lading, but as it happens, boats are built to transport cargo, and they must have it; yet, this fact alone is no reason why they should be saddled with a juridical monstrosity and be denied the lenient rights of equity in cases of clearly assumptive shortages, nor can they be expected to deliver that which they never received, bills of lading to the contrary, notwithstanding.

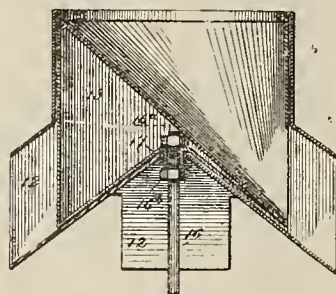
The through bill of lading system, which apparently

works without undue friction on the railroads, is not so agreeably worked under the conditions attending shipment by vessel, the change being notable in the bulk handled in the respective receptacles, viz., cars and ships, and as a proof of this, it is seldom that any litigation is entered into between the railroads and elevators on a grain shortage account. Judging, therefore, from the frequent attempts of vessel owners to secure a righteous decision in cases of assumed shortage, and the absence of such claims by the railroads, it is evident that the burden presses heavier on the one carrier than the other.

On general principles it should be denied that a vessel is responsible for a shortage in weights and measures, unless the act of barratry is charged against the master or crew, or that an agent can sign away the rights of redress in a well substantiated case of mistaken weights and measures. Further than this, the entire question hinges upon the merchandise being placed on board of the vessel, otherwise the bill of lading is vitiated, if not fraudulent on the face of it. Thus, if we assume that there was more cargo on board than was specified in the bill of lading, and the owner should claim it as his own, without the consignee being allowed redress by showing a mistake in weights and measures, the principles of law and equity would be clearly violated, and it seems needless to state that even-handed justice requires an equal consideration under opposite circumstances.

GRAIN CUT-OFF.

A grain cut-off has been invented by Philander D. Thompson of Neligh, Neb. As shown in the cut given herewith, it consists of two concentric cylinders, one fitting closely within the other, the outer one provided with two or more discharge openings in its sides with delivery



GRAIN CUT-OFF.

spouts at each, and the inner one provided with a discharge opening and a funnel shaped hopper.

A shaft is bolted to the bottom of the cylinder for the purpose of turning it. This shaft may be operated at any convenient point, as for instance, the cut-off may be in the cupola of a grain elevator and the end of the rod on the working floor where an indicator guides the operator in making connections with spouts running to any bin.

HOT WATER FOR GRAIN SMUT.

Few discoveries have been more useful than those made by botanists in the treatment of certain kinds of smuts, especially bunt and oats smut. In an excellent paper by Prof. J. C. Arthur on some important points, the writer says: "So simple a means to secure so large a return ought to come into general practice in a comparatively short time; and the writer believes this will be the case if unnecessary restrictions and precautions do not prevent a thorough trial by farmers. To bring it into general practice it should be shorn of all niceties of manipulation, which are only proper in the hands of trained men, and be so planned that the average man need not feel that he must employ a scientist to safely undertake the trial."

To have treatment successful with farmers, cast iron restrictions must be removed, because they will never follow them, and it is gratifying to note that Dr. Arthur presents facts to sustain this view. His experiments show a wider range in temperature than has usually been indicated. He says the limit for wheat for a five-minute treatment is 135 degrees Fahrenheit, and 130 degrees Fahrenheit for a ten-minute one. Raising the temperature 10 degrees for either length of time still left more than three-fourths of the seed in condition for germination. For oats the range is fully 5 degrees higher.

A scarcity of cars in South Dakota has caused the elevators in the central and northern portions of the state to become filled to overflowing and farmers are hindered from marketing their grain.

CANADIAN BARLEY.

The effects of the McKinley bill are being felt severely by Canadian farmers, who have already discovered that barley raising is anything but the profitable business that it was before the tariff excluded our barley from the American markets. The result is that large quantities of old barley have been carried over, in expectation that England would take what had formerly been sold across the line. Splendid samples of old barley have recently been offered in this market, almost perfect in color; but, owing to age, they have lost a considerable portion of their growing qualities as required by brewers, and consequently will have to be sold at a much lower price. During the past week or ten days sales have been made to brewers in this city of fine new malting barley at prices ranging between 50c and 53c, while feeding grades range all the way from 37c to 43c. These prices are vastly different from those which existed before the McKinley tariff came into force, when choice malting grades were sold in this market at 65c to 70c per bushel, and within the past ten or fifteen years they have sold at 80c to 90c, and as high as \$1 and \$1.10 has been paid. Since the tariff prevented Canadian barley from being exported into the United States, growers there have improved the quality of their grain wonderfully, and it is stated that some of the Northwestern states now produce such fine grades of barley that they are said to be equal to the Canadian product; at any rate, they are taking its place. At present the cultivation of barley is unprofitable for our farmers, and there seems to be no remedy for the congested condition of the market, other than that of curtailed production, as it has been obvious for some time past that England cannot be depended upon as a consumer of that class of barley which formerly went to the United States. England will of course take all the barley we choose to send her at a price; but that price is not a paying one. In other words, we cannot depend upon the English market for our high class barley, and consequently our farmers will have to grow less of it and more of something else. These are the plain facts of the case, and the sooner our growers recognize them the better.—*Trade Bulletin, Montreal.*

BILL NYE ON WAGON ROADS.

Our wagon roads throughout the country are generally a disgrace to civilization, and before we undertake to supply Jaeger underwear and sealskin covered Bibles with flexible backs to the African it might be well to put a few dollars into the relief of galled and broken down horses that have lost their health on our miserable highways.

The country system, as I call it, was, in my boyhood, about as poor and inefficient as it could well be. Each township was divided up into road districts, and each road district was presided over by an overseer of highways, whose duty it is to collect so many days' work or so many dollars from each taxpayer in the district. Of course no taxpayer would pay a dollar when he could come and make mud pies on their road all day and visit and gossip with the neighbors and save his dollar too.

The result seemed to be that the work done was misdirected and generally an injury to the road. With all due respect to the farmer, I will state right here that he does not know how to make roads. An all wise Providence never intended that he should know. The professional road builder, with the money used by the ignorant sapheads and self made road architects, would in a few years make roads in the United States over which two or three times the present sized load could be easily drawn, and the dumb beasts of the republic would rise up and call us blessed for doing it.

At Winnipeg the Canadian Pacific Railway is gathering samples of grain and grass grown in Manitoba for exhibition in traveling cars and distribution through the East.

A mill has been started in Hamburg, Germany, to grind American corn; and a large bakery is being established in Berlin to bake bread, cake, etc., from corn only.

"I have brought you up well, kernel," said the elevator to the grain. "But I was grown and wore a blade, and a tassel on my head, before you ever saw me," replied the kernel. "Stop bragging," said the bead pulley, "I elevate you both, and for fear you might fight I'll take one of you down again."

THE EASY PUSHER.

The Easy Pusher, which is herewith illustrated, is said to be one of the best and strongest ear movers now on the market. It comprises the advantages of being constructed of the very best material throughout, the bar is steel, the heel is malleable, and the triangular bit is made of the finest tool steel. As shown in the cut, it has lugs extending downward on both sides of the rail so as to hold it firmly in position and prevent it slipping sideways, and the triangular bit or steel marked *B* cuts into the rail when pressure is applied and prevents slipping backward, even though the rail is icy, greasy or wet.

When the pressure is released the steel spring marked *C* lifts the sharp steel bit from the rail, thus saving it from being dulled or sliding over the rail when following the wheel. The bit can also be inverted until the three points are dulled and then sharpened. It is easily operated and thousands who have them in use give ample testimony that they are all that they are recommended.

Any additional information can be secured by addressing the E. H. Stafford Company, Grand Rapids, Mich.

WHEAT THIEVES AT MINNEAPOLIS.

The pestiferous nuisance so long complained of by the grain trade of Minneapolis, the petty wheat thief who goes about with his bag on his back, has run to the end of his rope. An important meeting was held in the directors' room at the Chamber of Commerce October 31, in which, after two hours' talk, a plan was practically agreed upon which will put an end to 95 per cent. of the trouble.

The meeting was called to order by the chairman of the State Board of Railway and Warehouse Commissioners at the instance of State Weighmaster C. M. Reese. The entire board was present, Judge John P. Williams, General Becker, Col. W. M. Liggett and Secretary A. K. Tiesberg.

There were present representing the Chamber of Commerce, President C. A. Pillsbury, and a committee consisting of Frank R. Pettit, Charles M. Harrington, S. S. Linton, H. W. Commons and L. W. Campbell.

The railroads were represented by Receiver Truesdale, of the Minneapolis & St. Louis; General Superintendent Williams, of the Milwaukee Road; Mr. Case, of the Great Northern Road; Mr. Scott, of the Omaha, and Mr. Kimberly, of the Northern Pacific.

The meeting was an informal one to discuss some method of preventing or at least lessening the amount of pilfering from the grain cars in the yards and on the tracks in and about Minneapolis. The meeting was opened by the reading of a letter addressed by State Weighmaster C. M. Reese to the state railroad and warehouse commission, in which he called attention to the large amount of stealing going on. This was particularly noticeable in cars that are loaded out of elevators in this city and sent to the mills. In these cases, as there were two weights, it was possible to determine exactly how much was stolen. The evil had grown to such great proportions that Mr. Reese felt that it was due the elevator men, the millers and the country shippers to see that it was stopped.

C. A. Pillsbury pointed out to the commission that, for all practical purposes, the law did not protect the owner of wheat on track. Under the law it was necessary to prove that the wheat found in the possession of a man or boy who had stolen it was from some particular car. As the stealings were only a small quantity at a time, it was petit larceny, and, though it was possible to convict, it was almost impossible to punish the offenders. He referred to the attempt of the Chamber of Commerce several years ago to suppress the evil, but added that it had to be abandoned, after considerable money had been spent, because of the law to protect. The trouble arose from the fact that railroad companies permitted boys and women and men to sweep up the wheat left in the cars after they had been unloaded. These boys and others, under the guise of sweeping empty cars, were often really stealing from loaded ones.

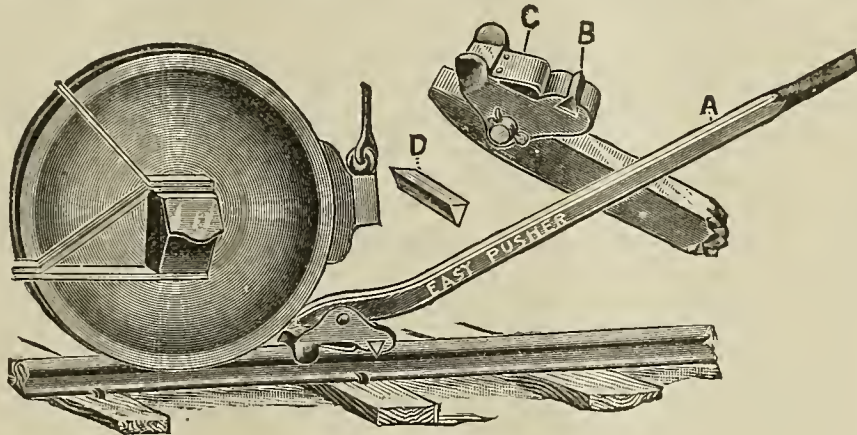
General Becker jocularly remarked that if he lived in Minneapolis he would resign from the board and adopt the wheat sweeping business for making a living.

F. W. Campbell, of the Chamber of Commerce com-

mittee, which had charge of the prosecution for the prevention of pilfering, outlined the work done and said, as a result, one man who pleaded guilty was sent to state prison, and another was seared into skipping the country; a few boys were sent to the reform school, but, though there was no doubt that many of the men and boys arrested were guilty, they escaped on technical construction of the law.

General Becker had given the matter considerable thought, and he reviewed the problem before the board at some length. He said: "The object, I take it, is to prevent or lessen the petty stealing of grain from cars in the yards and on tracks about these two cities. Many people think the railroad companies, because they have received the goods and because it is in their control, ought to be responsible for it; that they should make up any shortage that may result from such pilfering. But the railroad companies ought to be given some protection. The police of Minneapolis and St. Paul should protect railroad property as they protect my property. I had hoped to see the mayor and the chief of police of Minneapolis at this meeting. I understand they have been invited."

When the railroad men were asked what they thought, Mr. Scott, of the Omaha Road, said that his road suffered not only from the sweepers, but from people who stole potatoes, coal and other freight. So serious had the trouble grown that the coal companies now refuse to have coal shipped in open cars. In St. Paul the Omaha Road had attempted to break up the pilfering. The thieves were arrested and convicted, but when it came to having them punished it was always some "small" boy



THE EASY PUSHER.

or some "poor" woman, with whom the court was disposed to be lenient, and they were usually discharged with a reprimand. Mr. Scott told of one case, that in spite of the fact that it is a serious matter to the Omaha Road, brought down the house. He said: "We had one woman arrested twice and we had no trouble in convicting her, but she was released each time upon a reprimand. So we ordered our policemen to keep her out of the yard. One of the officers caught her in a car afterward and started to arrest her, but she turned on him and they had some difficulty. Now she has begun an action against us and I suppose she'll get judgment against us."

Mr. Pillsbury believed that if the matter was fully explained to the police judges they would help to suppress the trouble. He did not think it right to appeal to a judge asking him to convict any particular person, but he thought it perfectly right to inform the court as to the enormity of abuses.

Mr. Scott said that this had been tried. "But the fact is these people have votes," he said, "and it is impossible to do anything with them."

C. A. Pillsbury sprung what seemed to be the solution of the whole problem. He proposed that the state grain inspector's department secure the samples and seal the cars up. Most of the pilfering is done from cars that have been opened by the sample men or the inspectors and afterward left open. If the cars could be sealed up this would prevent most of the stealing.

"There you've got it," said Mr. Case, of the Great Northern. "That will do the business."

Frank Pettit and Charley Harrington explained that though this had been proposed two years ago and it was opposed by many grain men, they were at the time and are now in favor of Mr. Pillsbury's plan.

There was some talk about getting a second or third sample. But it was agreed that this could readily be secured by the state grain inspector's department at a slight additional expense for each sample wanted. The first sample was to be secured by the state inspectors at the

time of the state inspection. This was the idea as expressed by Mr. Pillsbury and it met with general approval on all hands. In addition, however, it was decided that the railroads should keep all the sweepers out of the yards.

Mr. Commons called attention to the fact, as he stated, that their own watchmen were not protected by the police as they should be. Watchmen were assailed about the elevators by the wheat thieves, who came to get their plunder, and in some way there should be an effort made to protect them.

Receiver Truesdale thought the three interests there represented, the State Board of Railway and Warehouse Commission representing the farmers, the railroad men and the Chamber of Commerce men representing the millers and elevators should join in an address to the mayor, asking that a proclamation be issued warning the people to keep away from the cars. He wanted the police to help to guard this property. Mr. Pillsbury proposed, as a substitute that every large elevator should hire at least one policeman, the railroads should pay some and the city authorities should furnish some protection.

The question was canvassed and it was decided that the railway commissioners have now sufficient authority under the law to establish a bureau and collect the wheat samples and then seal the car.

The next day a meeting of the Grain Receivers' Association was held in the directors' rooms at the Chamber of Commerce for the purpose of taking some action to prevent the stealing of grain from cars.

There was a fair attendance of the members of the Grain Receivers' Association, including Messrs. Martin, Woodward, Commons, Pettit, Frasier, Brooks, Geo. Dodge, Linton, Maxfield, Yerxa, Sherman and Kirkbride.

The following resolution, introduced by Mr. Kirkbride, was unanimously adopted:

Resolved, That the Grain Receivers' Association heartily approve and indorse the suggestion made by President Pillsbury in regard to having the sampling of grain in cars done by the state, and request that the matter be laid before the board of directors.

The president appointed the following committee to confer with the Board of Railroad and Warehouse Commissioners to arrange for a system of sampling: J. H. Martin, L. W. Campbell and W. O. Dodge.

Another matter which will shortly come up before the association will be the weighing out of grain into cars by the state, so that the state's officers can give a direct certificate of weight to cars in which grain has been transferred.

IMPORTS OF RICE.

In September we imported 5,947,958 pounds of rice, and 4,855,910 pounds of flour, meal and broken rice; against 3,849,818 pounds of rice, and 10,029,318 pounds of flour, meal and broken rice in September last year. During the nine months ending with September we imported of rice 68,747,378 pounds, valued at \$1,326,207, and of flour, meal and broken rice 47,843,227 pounds, valued at \$890,737; compared with 116,812,973 pounds of rice, valued at \$2,507,558, and 67,063,273 pounds of flour, meal and broken rice, valued at \$1,104,718, during the corresponding period of 1891.

From the Hawaiian Islands we imported free of duty in September 986,900 pounds of rice, against 471,300 pounds in the preceding September; and 7,016,400 pounds, valued at \$318,418, during the nine months ending with September; compared with 3,160,000 pounds, valued at \$177,761, during the corresponding period of last year.

We re-exported in September 50,500 pounds of Hawaiian rice and 741,145 pounds of other foreign rice, against 570 pounds of Hawaiian and 1,054,894 pounds of other foreign rice in the preceding September. For the nine months ending with September the re-exports were, of Hawaiian, 52,489 pounds, valued at \$1,424, and of other foreign, 7,838,562 pounds, valued at \$161,805; in comparison with 14,537 pounds of Hawaiian wheat at \$558, and 7,501,811 pounds of other foreign rice, valued at \$154,531, for the corresponding nine months of 1891.

The car famine on the Mexican National Railroad still continues. Yards in Texas are crowded with corn cars.

ECONOMIES OF WATER TRANSPORTATION.

Lewis W. Haupt, consulting and maritime engineer, in a late issue of the *Manufacturers' Record*, says:

If the same attention were given to improvement of artificial waterways as has been devoted to railways, the economy of movement would be greatly increased, millions of dollars would be saved for investment in manufactures or other more permanent improvements, instead of being spent in repairs to a short-lived and perishable form of plant, and, best of all, the railroad managers themselves would utilize the canals, which have become the property of their companies, for the enlargement of their revenues, while, at the same time, they reduced their rates and, thus stimulated and increased their business. Now, the energy and attention of their numerous solicitors is expended in securing every pound of freight for the railroad, while the same industry in behalf of the canal would put in motion as large tonnage which cannot be touched at the present rail rates. And yet we find the railroads in many cases patronizing competing canals for the transportation of their own construction materials, rather than haul it on lines under their own control and connecting the same terminals. Why, if not because it is cheaper?

Even to-day, a comparison between the old time canal and the most improved and efficient railroad in the country may be made which will show the superiority of the waterway. Thus a canal terminating in Philadelphia, having a draft of $5\frac{1}{2}$ feet, and capable of carrying boats of 175 tons' capacity, charged from 40 cents to 70 cents per ton tolls from the mines to tide water, 108 miles. This canal has a bottom width of 40 feet and depth of $6\frac{1}{2}$, with locks 110×18 feet. The boats weigh about 65 tons, making a gross load of 240 tons to each team of three mules, or 80 tons per mule, moved at the rate of $1\frac{3}{4}$ miles per hour. The tractive force was only 1.78 pounds per ton, while on a railroad it is about 9 pounds. The boat and team cost \$2,500, or \$38.44 per ton. The ratio of paying to dead load is 175 to 65, or nearly three to one.

On a first-class modern grain car of 60,000 pounds' capacity, weighing 30,000 pounds, the ratio is two to one. The average weight of the box car being 13.4 long tons and it cost \$625, the cost per ton of the car is \$46.34. But the 125,000-pound locomotive costs \$10,000, and the average train load in the United States, by Poor's Manual for 1891, was 163 tons, requiring but, say six, of the 30-ton cars; hence the motive power per car cost \$1,666, or \$124 per ton, which, added to the \$46.34, gives for the cost of rolling stock per ton \$170.34, as contrasted with \$38.44 for the canal. It is true, however, that on favorable grades one engine can handle from 40 to 50 cars, thus greatly reducing the cost of motive power, but the averages are a better base of comparison. The life of the boat is longer also than that of the car, being 18 to 20 years.

Now as to the load. One boat's load of 175 tons would fill nearly six cars of 30 tons' capacity, or an average train, for which the expenses of movement are much greater; but, without going into a detailed analysis of individual items of expense, we may take the reported average rate for freight movement per ton mile as being the measure of the aggregate cost of overcoming all the resistances opposed by railroads to traffic. The lowest rate reported for 1890 in Poor's Manual was that of the Chesapeake & Ohio, which was 0.54 cent, or 5.4 mills, per ton-mile. The next lowest was the Louisville & Nashville, on which the rate was 5.7 mills, while the New York, Lake Erie & Western ranks next at 6.4, and the Pennsylvania next at 6.5, and thence the rate rises to 16.1 mills for the Southern Pacific. The average rate of all is over 9 mills per ton-mile. Compared with this we have on the canal for captain and crew \$4.75, feed for three mules \$1.50—total for movement of boat per diem \$5.75; depreciation and interest at 20 per cent., \$500; total expense for season \$638 per boat, making twenty round trips and delivering 3,500 tons of coal, which is at the rate of $18\frac{1}{4}$ cents per ton. Adding 8 cents for unloading brings it up to $26\frac{1}{4}$ cents for 108 miles, or 2.4 mills per ton-mile, but as the boats return empty, their round trip is, in fact, 216 miles, and the cost, if there were return loading, would then be but 1.4 mills. In neither case has the roadway been considered. The surprising economy of water transportation is, however, more fully illustrated by the results of the tramp freight vessels on the ocean, which may carry 3,000 tons or more

2.0 miles a day at a cost of \$300, or 10 cents per ton for 250 miles, which is but four-tenths of a mill per ton-mile.

Even greater economy has been secured in many of the recent freight steamers built on the great lakes, some of which have a capacity of 3,000 tons on a draft of 16 feet, and one is reported to be on the stocks capable of carrying 6,000 tons. The rate of 1 cent per bushel on wheat from Chicago to Buffalo is not now unusual. At 33 bushels to the ton this is but one-third of a mill per ton-mile, or one twenty-seventh the average railroad rate.

The success of the whaleback C. W. Wetmore was such as to cause other parties to engage in the construction of additional vessels of this type, both here and abroad, with promise of still greater efficiency.

These astounding results are attributed to the great efficiency of marine steam engines, and to great capacity for storing the paying load, so that, notwithstanding the long haul over non-productive waters, the ocean carrier is out of reach in the competition with the land lines; in fact, there can be no competition, for the two are reciprocal and mutually beneficial. The marine engine requires only one-half ounce of coal per ton-mile, or a ton of coal would produce 64,000 ton miles of ocean carriage at freight speed, while the same amount of fuel will only produce 10,000 ton miles on a railroad, or about one-seventh as much.

From whatever standpoint, therefore, the question be viewed, it would seem that, even with the improved efficiency of the railroads, which, it is stated, was increased last year over 60 per cent., they are not able to cope with the unpretentious and antiquated system of canal transportation, and the attempts which are systematically made to obliterate our canal routes, limited though they are, if consummated, would be a calamity to the nation as well as to the railroads, for manufactures and commerce would be restricted by increased taxes.

The prosperity of the country would be greatly enhanced if a more general interest were manifested in enlarging our great system of waterways and in bringing them into more intimate co-operation by improving their connecting arteries. It has been shown by statistics that the \$30,000,000 expended on the improvements on the great lakes have effected an economy in the freight moved in one year of more than three times the total cost. Surely there are few, if any, expenditures of the government that can produce a better result than this of the river and harbor bill.

DEVICE FOR TESTING GRAIN.

A new device has been invented for testing grain and a patent granted by the British Patent Office. The invention relates to an apparatus for slicing grain for purposes of testing or examining the conditions of the same. The machine consists of two plates, O and R, joined together with an intermediate spacing piece N. In the upper

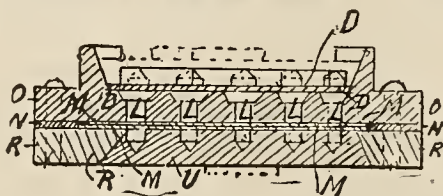


plate O as is shown in illustration is a series of holes L L for the reception of the grain. A sliding knife works between the two plates and cuts the grains which may be examined by removing the upper plate.

A modified form of knife is described which instead of a single blade consists of a series of sections or separate blades by means of which the grain in any one or more of the series of holes can be cut.

Philadelphia has received from January 1 to November 1 10,274,966 bushels of wheat, 20,803,854 bushels of corn, 4,357,550 bushels of oats and 2,874,462 barrels of flour, compared with 5,985,803 bushels of wheat, 3,168,452 bushels of corn, 3,570,300 bushels of oats and 1,731,108 barrels of flour received in the corresponding months last year.

Philadelphia has exported during the ten months preceding November 1 8,239,184 bushels of wheat, 18,687,476 bushels of corn, 448,877 bushels of oats and 1,577,362 barrels of flour, compared with 5,662,830 bushels of wheat, 1,513,487 bushels of corn, no oats and 871,923 barrels of flour exported during the corresponding period of last year.

IMPROVE THE ERIE CANAL.

It is gratifying to note that the state of New York has again awakened to the commercial importance of the canal which gives it access to the Hudson River and thence to the seacoast.

While the present use of the canal is largely that of a check on the railroads, no improvements have been made, except minor ones, for the past thirty-six years, notwithstanding the fact that the railroads were compelled to carry grain to the seaboard, on account of the canal, at about one-half their published tariff of rates. It is not generally known that the tonnage of the canal in the past twenty years was over 100,000,000 tons, and that for the last eight years nearly 15,000,000 bushels more of grain were sent into New York through the canal than by the combined transportation facilities of the many railroads and the coastwise and river vessels.

The port of New York last year received 30,000,000 bushels of grain by canal, and 63,000,000 bushels by rail. The rate by rail to New York was 7 4-5 cents a bushel, but this figure was about cut in two during the navigation season, and the full credit of saving about $3\frac{1}{2}$ cents a bushel on the transportation of grain is due wholly to the canal; besides when there is a rush of grain to the seaboard over and above what the railroads can handle, the canal steps in and not only relieves the railroads, but also regulates to a certain extent the rates.

In 1889 the canal carried 45.76 per cent. of the grain shipped from the elevators; the railroads carried 54.24 per cent., and the average rate for the month on wheat by the canal was 4 cents per bushel. Last July the canal carried but 28.28 per cent., and railroads 71.72 per cent. of the shipments, while the highest rate on wheat by the canal during the month was only $2\frac{5}{8}$ cents per bushel.

The Erie Canal is an indispensable factor in the commerce of the Northwest, and well advised action will earn the gratitude of the vast grain interests, and this too to the tune of from 3 to 5 cents a bushel for transporting their produce the last 500 miles of the route to the seaboard.—*Marine Record*.

WHEAT EXPERIMENTS IN INDIANA.

The director of the Purdue University Experiment Station gives the following points of a recent bulletin concerning wheat growing in Indiana:

Velvet Chaff, Michigan Amber and Fultz varieties of wheat have been grown for nine years on the university farm and rank in value as named, though Michigan Amber surpasses Velvet Chaff as a rust-resisting variety.

Red Clawson and Jones' Winter Fyfe are the two most promising recently introduced varieties.

For eight years six pecks of seed sown per acre have given the most satisfactory results.

In the region of Lafayette a higher average yield has been secured from wheat sown September 20 over other dates of sowing.

Judicious rotations, including grass, have given better return than constant grain cropping.

Heavy applications of manure and fertilizers to a worn soil growing crop and wheat alternately have given paying returns.

The average results of all experiments at this station with fertilizers and manures, upon wheat during the last three years, in full two-thirds doses, have not been profitable.

The use of hot water or copper sulphate failed to destroy the spores of loose smut.

Bunt or sticking smut in wheat was successfully destroyed by using hot water or copper sulphate.

Early and late harvesting of wheat had practically no effect on the yield or weight of grain.

Yields of grain and straw were considerably reduced by mowing wheat on certain plots in spring to check rankness of growth.

In comparing form of nitrogen for fertilizing the wheat plant, sulphate of ammonia gave rather a better yield than nitrate of soda or dried blood.

As the plants fertilized with nitrate were slower to mature than the others, these also suffered from rust more than did the others.

Leak & McElveen, Montgomery, Ala.: "We cannot do without the AMERICAN ELEVATOR AND GRAIN TRADE and if it fails to reach us on time we raise a row."



[We invite correspondence from every one in any way interested in the grain trade, on all topics connected therewith. We wish to see a general exchange of opinion on all subjects which pertain to the interest of the trade at large, or any branch of it.]

JUST STARTED.

Editor American Elevator and Grain Trade:—We have just started into business and are operating a number of elevators on the Burlington & Missouri Railroad. Please send us your AMERICAN ELEVATOR AND GRAIN TRADE.

Yours very truly, BIGGER BROS. & SMITH.
Lincoln, Neb.

TO DELIVER AMOUNT RECEIVED.

Editor American Elevator and Grain Trade:—I wish the railroad companies were in some way obliged to de-

Bradgate, Iowa; Chadron, Whitney, Harrison and Cody, Nebraska, and Piedmont, Hermosa and Oelrichs, South Dakota.

Messrs. W. H. Howard & Son are buying at all the above-named points and also at Gladbrook, Conrad Grove, Stanhope, Jewell Junction, Webster City and Linn Grove, Iowa, and Beresford, South Dakota.

The firm has a large plant at Sterling, Illinois, for cleaning, clipping, weighing and handling their grain, thereby getting the highest market price for all they ship to market.

Yours, A REPORTER.
INDORSES "PROTEST AND PETITION."

Editor American Elevator and Grain Trade:—I inclose "A Protest, A Petition," signed. Any one who does not sign such protest and petition is not looking to his own interests, and we wish you abundant success in getting signatures.

Our elevator is a 10,000-bushel country grain house, and is operated by the Co-operative Union of Palmyra, Neb. The officers are J. A. Graves, president; H. J. Pegler, vice-president; John Lonam, secretary, and A. McIntyre, treasurer; directors, O. A. Severe, Davis Rus-

time to keep the grain from burning. Even with the best of care some of it would be roasted brown as kiln-dried malt. The trouble was that the fire played right against the iron of the drier, and the grain lay on the other side, so that when the iron got hot enough to do effective work some of the grain lying next to it was sure to get burned. After giving it a good trial I condemned it as an infernal nuisance and threw it out. I sold it to a man who wanted it to dry sand, and when last I heard from him the outfit was doing excellent work—on sand.

The more I see of it the more am I convinced that grain is a delicate thing to handle just right. The next time I need a drier I will get one that dries and is heated by steam or hot water, and one that does not need a heavy brick setting, and I advise other grain dealers to do likewise.

Yours fraternally, MEEHAN.

AN IDEAL BILL OF LADING.

Editor American Elevator and Grain Trade:—The agitation for a uniform bill of lading that would be a receipt for grain received ended in the organization of the National Transportation Association from which we had

Form 2 Suit Us.

—THE LIGHTNING DISPATCH LINE—

CATCHEM, ROBEM & BEATEM RAILWAY CO.
GRAIN BILL OF LADING.

189.....

Received from

The following cars said to be loaded with grain in good condition (quantity and value unknown to anyone) to be transported over our road whenever it suits our convenience and to be delivered to consignee whenever we d—n please or to such other carrier, if the grain is to be forwarded to a point not on our line, as will allow us the largest proportion of the through rate. It is distinctly understood that we are not responsible for anything. If the grain leaks out or is stolen from car, is damaged by rain or heats in transit it is clear that shipper is to blame. If consignee or connecting carrier does not unload our car before we want to use it, we reserve the right to store it in elevator of warehouseman who will pay us the largest commission. The charges will be added to the freight bill and must be paid with interest from date of shipment before warehouse certificate will be delivered. We guarantee that the rate for transporta-

tion from the place of shipment to.....

shall not be less than per 100 pounds and charges with interest.

It is understood that we will charge for switching whatever and whenever we desire. If grain is not unloaded before it arrives at destination we will charge as much demurrage as we think owner can stand.
If this bill of lading is altered we will keep the grain.

CONSIGNEE.	Car Number.	INITIALS.	KIND OF GRAIN.	SAID TO WEIGH.

.....Freight Agent.

AN IDEAL BILL OF LADING.

liver the same amount of grain that they receive. Then I think we would get correct weights at terminals and the so-called "track thieves" would be no more.

Yours, WALTER PARKS.
Airlie, Minn.

ERECTED ELEVATOR IN OKLAHOMA.

Editor American Elevator and Grain Trade:—I have built an elevator of 15,000 bushels' capacity. Seeley, Son & Co. of Fremont, Neb., were the contractors, and I am well pleased with the building. The trade is quiet and most of the grain has moved, but we are looking for a better prospect next season. Herewith inclosed please find \$1 as subscription for the AMERICAN ELEVATOR AND GRAIN TRADE for one year.

Yours respectfully, FRANK MACH.
Oklahoma City, Ok. Ter.

COMPLETED THIRTEEN NEW ELEVATORS.

Editor American Elevator and Grain Trade:—Messrs. W. H. Howard & Son of Webster City, Ia., well known as grain buyers in Central Iowa, Northwestern Nebraska and Southwestern Dakota, have just completed thirteen fine elevators, each having a capacity of 20,000 bushels, at Harcourt, Carnarvon, Burt, Renwick, Bancroft and

sell, R. A. Maiben, W. B. Winklepleck and W. H. Walker, and I am manager. Inclosed please find \$1 for which send me the AMERICAN ELEVATOR AND GRAIN TRADE for one year.

Very truly yours, W. R. CARTER.
Palmyra, Neb.
EXPENSIVE EXPERIENCE WITH A GRAIN ROASTER.

Editor American Elevator and Grain Trade:—In your last month's issue is a picture of a grain drier that puts me in mind of one I had some years ago.

We had a lot of damp grain on hand and the farmers had still more for sale, and it occurred to me that a grain drier would be a good thing if it could be bought cheap. Accordingly I made inquiries, but the prices, I thought, were too high to make it worth while to put one in for just a few months' use, so I concluded to let it drop. A machinery house I had written to about driers soon after sent their traveling man down to see me and, although I really did not want the drier, I yielded to his blandishments and the machine was sent along.

It was cheap, to be sure, but to say it was a success would be wide of the truth, in fact, it was a dismal failure. One man had to give it his entire attention all the

much to expect. For a time the activity displayed by the executive committee showed that it knew what was wanted and that it proposed to get it. The enthusiasm was soon exhausted and the association died. With it the hopes for reform and uniformity in hills of lading which so many had fondly cherished died, and some have even forgotten that such an association ever existed. It promised so much and accomplished so little. In fact nothing but broken promises remain to remind one that the association once existed.

As no organized effort is being made to secure a more equitable bill of lading than the present imposition which most shippers have to accept, I ask you to publish the one sent herewith. I detest flattery and enjoy severe criticism, so will be pleased to have any one, shipper, receiver, or traffic manager, suggest changes or point out the weak points of this form of hill of lading. However, I want shippers to distinctly understand that we do not want carriers to guarantee to deliver in good condition the exact amount received and within a reasonable time. If they were required to do that they would sell the grain on their own account and deny that it was received.

Some contend that the carrier as well as the shipper

should pay for delaying the property of the other and that the receiver of a number of cars should be allowed more time to load or unload than he who receives but one car. There may be some slight excuse for this demand. Shippers have pointed to the fact that carriers take their own time to deliver cars, and when a number is ordered or shipped usually require several weeks for delivery. That sounds well, but we all know that carriers deliver cars just as soon as possible, while receivers will keep grain in cars on a declining market just to get free storage.

During the grain blockade which has lasted for several months I have seen shippers exhibit supreme audacity by kicking direct to traffic managers because they were compelled to suspend business on account of empties being sent to a competing point. Their houses were full, they could buy no more grain so wasted their time kicking.

Receivers have been just as unreasonable and kicked furiously because they were charged demurrage on a number of cars that were delayed only a month and then delivered at the same time with a number of other cars, so that they could not dispose of them within the time allowed by carrier for unloading.

Although my house is full I have shipped but one car in twenty-five days. Prices have declined and I have lost considerable thereby, but I have not lost my temper. It has only been aroused and I propose to present a bill for the decrease in the value of my grain during the enforced delay, but I digress.

It was my intention to show how the poor railroad companies had been imposed upon and ask my fellow shippers to write to carriers and request them to protect themselves by adopting the equitable bill of lading sent herewith. It is a little stronger guard against loss than the one used by carriers I patronize, but then I know shippers will be pleased to receive it.

Very truly, JUSTICE.

AN ONTARIO ELEVATOR.

Among the most prominent grain elevators of Ontario is the one illustrated herewith, which is owned by the Sadler, Dundas & Favelle Milling Company (Limited), successors to Sadler, Dundas & Co. It is operated by this company in connection with its saw and flour mills at Lindsay, Ont.

As will be seen by referring to the illustration it is a well constructed frame house, covered with tin. It has a capacity of about 125,000 bushels and is operated by steam, the steam plant being located in a separate building some distance from the elevator.

CEREAL PRODUCTION IN 1889.

Last month we gave the average yield per acre and the acreage in 1889 in some of the states as reported by the Census Bureau. Since then we have received a few more copies of the *Census Bulletin* from which we get advance information regarding the yield and acreage in twelve more states as follows:

States.	Barley.	Buck-wheat	Indian Corn	Oats	Rye.	Wheat.
Wisconsin...	32.06	13.74	30.37	37.33	15.45	15.72
Acres	474,914	77,458	1,120,341	1,627,151	275,058	744,080
Minnesota...	25.38	12.75	27.39	31.63	19.92	15.51
Acres	358,510	22,090	901,690	1,579,258	62,869	3,372,627
N. Dakota...	14.35	6.39	15.35	14.32	7.78	9.74
Acres	109,339	147	11,980	402,760	1,568	2,708,199
S. Dakota...	9.26	7.32	17.46	12.87	7.06	7.32
Acres	97,370	1,561	753,309	580,289	9,229	2,259,846
Michigan...	25.40	11.59	28.94	34.04	14.93	16.50
Acres	99,305	70,046	994,597	1,085,759	149,754	1,501,225
Ohio...	28.58	11.59	35.71	33.02	16.89	15.67
Acres	37,092	14,052	3,189,553	1,215,355	59,643	2,269,585
Kentucky...	23.73	9.91	26.49	13.60	9.31	11.91
Acres	5,776	384	2,960,382	645,316	45,516	898,694
Tennessee...	17.81	5.80	22.80	12.51	6.26	9.46
Acres	3,585	1,231	2,791,324	588,138	26,443	877,361
N. Carolina...	11.66	7.01	10.92	8.33	4.90	6.44
Acres	302	1,800	2,360,627	541,851	56,496	666,509
S. Carolina...	13.70	7.26	10.23	9.80	4.19	5.70
Acres	688	65	1,343,990	308,056	4,129	115,610
Virginia...	19.98	7.97	14.98	11.49	7.63	10.72
Acres	2,051	5,170	1,525,701	495,395	52,063	736,997
W. Virginia...	16.32	8.80	23.16	16.30	7.83	10.41
Acres	326	13,696	592,763	180,815	14,962	349,616

Clover seed amounting to 59,840 pounds was exported in September, against 1,909,147 pounds in the preceding September; and during the nine months ending with September 6,083,157 pounds, valued at \$543,438, was exported; against 12,332,312 pounds, valued at \$948,475, during the corresponding period of 1891.

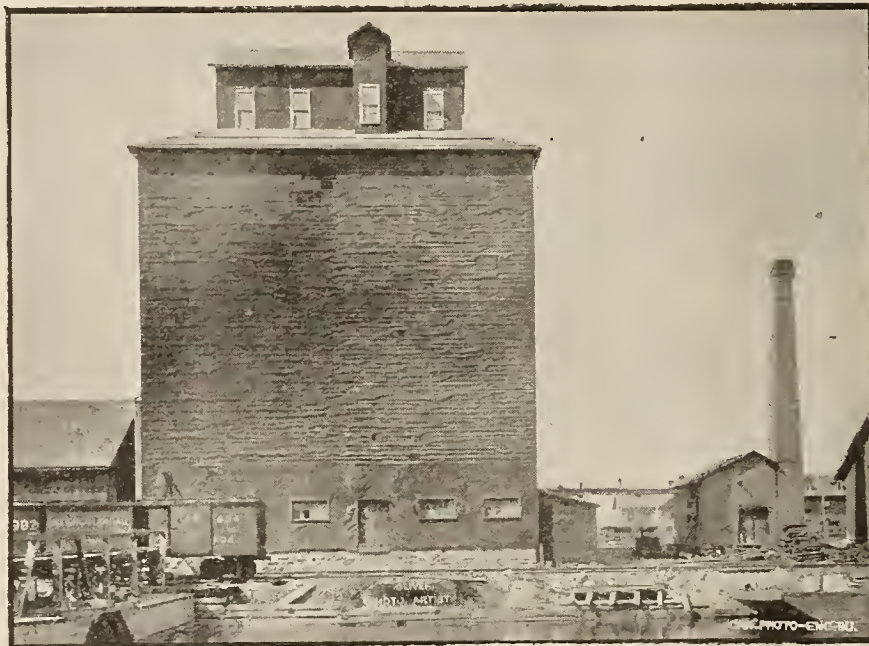
Trade Notes.

There is a land that flows with milk and honey—
Not the condensed, nor yet the sorghum strains—
Each dweller bears a gripsack fat with money,
Bonds, coupons, stock, and various other gains.
Happy are those, as at high tide, the fishes;
No tear doth drown the laughter in their eyes;
For better luck they have no sort of wishes;
The gold is theirs—they learned to advertise.

All users of appliances requiring detachable chain or chain belting of any style will be interested in the new lines recently brought out by The Jeffrey Manufacturing Company of Columbus, Ohio. For further particulars send for their catalogue.

Advertising is only a factor in the fabric—the keystone, perhaps; it mustn't bear the burdens of intrinsic merit; management, character—these, too, are vital to success, and you must provide them. Don't fail to take care of the business and then blame advertising.

Lincoln's famous saying: "You can fool all the people sometimes; you can fool some people all the time; but you cannot fool all the people all the time," should be a fundamental principal with advertisers. Put the impress of truth on your announcements. Do not allow them to



AN ONTARIO ELEVATOR.

have even the color of fraud. Tell the truth even against yourself, and, when the confidence of the public is once gained, beware how you trifle with it. It is hard to build up; easy to pull down.

The repetition of advertising is one of its main forces. The Bible tells us of the man who was heard and supplied "because of his importunity." The boy crying the evening papers or the bootblack repeating his "Shine," "Shine, sir," often calls us out of our "brown study" to a realization of our ordinary needs.

The A. P. Dickey Manufacturing Company of Racine, Wis., is sending Dickey Quadruple Separators to Honolulu, Hawaii, where the machines will be used to clean rice, which is an important crop in that country. The A. P. Dickey Manufacturing Company also has a shipment of its warehouse mills on the way to Mexico where they will be used to clean castor beans.

To every business man a dull season comes at some time in the year, and to all not at the same time. It is a trying period with most men, and many there be who fail to survive its stagnating effects. But the real wide-awake, thoughtful advertiser has a remedy even for the dull season. His panacea is printers' ink, of course, but it is the particular manner in which that printers' ink is used that enables him to bridge the season over.

Many millions of dollars are annually spent in advertising in this country. Much is thrown away, but a great deal which gives returns can be improved so that a still greater amount may be reaped. A prominent error is to give too many display lines, too little space between each, and too much matter elsewhere. Everything interesting in this way should stop before the whole topic is exhausted. Leave something to the imagination. After using five or six different names, stop. Let each have enough character so that it will not be huddled into a

combination with others. Leave out useless words. No one will read an advertisement half a column long in agate or nonpareil.

The opening of its new factory at Columbus, O., by The Jeffrey Mfg. Co., was made the occasion of a "shop warming" by the employees on the evening of November 4. The music and dancing was followed by a banquet at which the knights of the lathe, file and drill press ably acquitted themselves. The programme for the evening was very cleverly arranged and included among its numbers the Jeffrey waltz and the 6x8 Bucket waltz.

If Sir Isaac Newton forgot for the moment that he himself could change his seat when he was so absorbed in his work that he asked the maid to remove the fire!—if Dean Swift could forget his own name on the threshold of a friend's house—if the greatest are liable to abstraction so intense as to make them forget the simplest things, surely the mass of mankind cannot escape the same tendency. The advertiser's emblem should be the Forget-me-not!

Merchant & Co., of Philadelphia, write us: "The new industry has been born. It is no longer 'American roofing plates are going to be made.' Instead it is 'American roofing plates are being made.' If we did not know that our American roofing plates are better in material, coating and in every other particular than the plates made abroad we have heretofore guaranteed, we would not have substituted the home made for the imported. The election may have caused some doubt as to the future of American plates, but we want it understood that we introduced American roofing plates on the basis of quality alone and not politics. Regardless of what others may think of the manufacture of tin plate in the United States, we still intend to supply the trade."

QUALITY OF THE CROP.

John O. Foering, grain inspector of the Commercial Exchange, who is now in the West inspecting the condition of crops, has written from Wichita, Kan., the results of his investigation to that point. At Columbus and Urbana, Ohio, he found new corn in a good condition, though rather dry for so early in the season, and while the berry is small it is well matured. A fair average crop is expected. He was not so well pleased at the outlook for the growing crop of wheat. It is so dry that wheat has not been able to get a good start in Indiana and Ohio.

Grain receivers at Indianapolis reported to him that corn in their section was irregular in quality. Considerable old corn is still in the hands of the farmers.

At St. Louis he found little interest taken in corn, as there was no new crop worthy the name; everything was wheat. Elevators and warehouses are full to overflowing, and thousands of loaded cars block the railroad tracks awaiting places into which to discharge their contents. A large portion is of good quality. The crop of white oats was the best he had ever examined of this year's crop.

From St. Louis to Wichita wheat looked well, but corn was generally poor. Shippers at Wichita were in doubt as to whether any corn from that section would be shipped to Eastern markets, as a heavy demand from Mexico was expected.—*Times, Philadelphia.*

BUFFALO'S GRAIN TRADE.

The grain trade of Buffalo continues to increase and 1892 is certain to outrank all preceding years. During October 19,255,247 bushels of grain were received by lake against 19,930,866, 12,599,297 and 13,934,823 bushels respectively for the same month of 1891, 1890 and 1889 respectively.

From the opening of navigation to November 1, the receipts by lake for twelve years were as follows:

	Flour, bbls.	Grain, bu.	Grain Inc. Flour, bu.
1892.....	7,802,296	111,601,859	150,613,349
1891.....	5,265,921	99,707,387	126,036,992
1890.....	4,831,543	77,072,003	101,229,718
1889.....	3,749,569	76,244,493	93,992,338
1888.....	4,111,694	64,088,587	85,247,057
1887.....	3,230,935	72,781,886	88,336,561
1886.....	3,657,726	63,856,658	82,245,288
1885.....	2,174,318	43,797,668	54,669,258
1884.....	2,094,781	48,515,835	58,989,740
1883.....	1,783,163	59,093,669	68,009,484
1882.....	1,585,299	42,641,606	50,568,101
1881.....	851,838	51,773,450	56,032,640

VISIBLE SUPPLY OF GRAIN.

The following table shows the visible supply of grain Saturday, November 12, 1892, as compiled by George F. Stone, secretary of the Chicago Board of Trade:

In Store at	Wheat, bu.	Corn, bu.	Oats, bu.	Rye, bu.	Barley, bu.
Albany.....		12,000	39,000	14,000	8,000
Baltimore.....	2,253,000	319,000	115,000	78,000	
Boston.....	236,000	439,000	28,000	1,000	10,000
Buffalo.....	3,577,000	794,000	492,000	43,000	714,000
do afloat.....					
Chicago.....	10,326,000	6,840,000	2,364,000	431,000	183,000
do afloat.....					
Cincinnati.....	7,000	8,000	5,000	12,000	119,000
Detroit.....	1,196,000	37,000	24,000	17,000	68,000
do afloat.....					
Duluth.....	7,276,000				
do afloat.....					
Indianapolis.....	523,000	73,000	107,000	11,000	
Kansas City.....	2,074,000	154,000	185,000	100,000	
Milwaukee.....	1,859,000	9,000	72,000	133,000	282,000
do afloat.....					
Minneapolis.....	6,790,000	8,000	89,000		191,000
Montreal.....	449,000	17,000	357,000	33,000	74,000
New York.....	15,288,000	1,370,000	3,136,000	102,000	12,000
do afloat.....	241,000	69,000	35,000	8,000	42,000
Oswego.....					
Peoria.....	126,000	150,000	175,000	43,000	6,000
Philadelphia.....	1,986,000	271,000	90,000		
St. Louis.....	6,591,000	81,000	348,000	49,000	39,000
do afloat.....	15,000				
Toledo.....	3,542,000	233,000	102,000	116,000	
Toronto.....	133,000		3,000		42,000
On Canals.....	1,073,000	1,124,000	144,000	16,000	288,000
On Lakes.....	1,637,000	1,098,000	284,000	62,000	684,000
On Miss. River.....	15,000	16,000	1,000		
Grand total.....	67,203,000	13,113,000	8,195,000	1,269,000	2,762,000
Same date last year.....	38,828,636	1,805,186	4,473,544	2,460,671	3,294,855

INSPECTED RECEIPTS AT CHICAGO.

According to the report of Chief Grain Inspector P. Bird Price the grain received at Chicago during the month of October was graded as follows:

WINTER WHEAT.

Railroad.	White.			Hard.			Red.				No Grade.
	2	3	4	1	2	3	1	2	3	4	
C., B. & Q.....	2	7	1041	437			99	252	131		17
C., R. I. & P.....	5		432	409			72	123	75		14
C. & A.....	2	3	385	229			14	357	80		33
Illinois Central.....			22	27			52	160	77		4
Freeport.....											
Galena Div. N. W.....				82	18			3	5		1
Wis. Div. N. W.....	5				4		2	23	3		1
Wabash.....	3	5	2	32	27		9	203	94		16
C. & E. I.....	2	3	2	1	3		3	146	32		20
C., M. & St. P.....	2	3	2	516	307		1	51	93		4
Wisconsin Cent.....											
C., St. P. & K. C.....				353	1096		4	35	32		3
A., T. & S. Fe.....	6	3		592	186		79	122	48		8
Through & Spec.....	2	2	1	61	44		68	253	43		36
Total each grade.....	4	30	17	11	3517	2,877	403	1728	713		157
Total W. wheat.....											9457

SPRING WHEAT.

Railroad.	2			3	4	No Grade.	White.		Mixed Wheat.
	2	3	4				2	3	
C., B. & Q.....	261	1175	286		50		27	305	22
C., R. I. & P.....	6	61	52					199	2
C. & A.....	5	37	18		2			15	2
Illinois Central.....		11	6					2	
Freeport.....	2	22	4						
Galena Div. N. W.....	61	396	69		7			19	1
Wis. Div. N. W.....	1	7	12		1				
Wabash.....	2	3	3					3	1
C. & E. I.....								1	1
C., M. & St. P.....	72	507	38		3			6	
Wisconsin Cent.....									
C., St. P. & K. C.....	1	102	23		2			1	19
A., T. & S. Fe.....	3	6							
Through & Special.....	339	25	3		9			87	1
Total each grade.....	753	2,352	514		74		28	656	24
Total Spg. wheat.....									4,441

CORN.

Railroad.	Yellow.		White.		2	3	4	No Grade.
	2	3	2	3				
C., B. & Q.....	791	290	83	36	1,516	828	219	4
C., R. I. & P.....	261	95	21	11	832	533	78	1
C. & A.....	411	39	154	28	593	63	13	
Illinois Cent.....	1,337	36	495	45	525	63	49	
Freeport.....	17	21	2	6	19	64	29	
Gal. Div. N. W.....	333	198	27	12	537	468	204	2
Wis. Div. N. W.....	2				3			
Wabash.....	591	74	274	70	246	39	20	3
C. & E. I.....	170	158	91	63	93	132	32	3
C., M. & St. P.....	40	40	3	4	206	379	160	2
Wis. Central.....								
C., St. P. & K. C.....	26	40	2		69	114	19	
A., T. & S. Fe.....	185	45	59	7	233	46	7	
Th'gh & Spl.....	24	15			3	17	4	
Total each grd.....	4,188	1,051	1,211	282	4,875	2,746	834	15
Total corn.....								15,202

OATS.

Railroad.	White.		2	3	White Clipped.		No Grade.
	2	3			1	2	
C., B. & Q.....	127	485	181	188			23
C., R. I. & P.....	13	666	59	120		1	3
C. & A.....	9	58	40	16		3	1
Illinois Central.....	12	195	107	95			4
Freeport.....	3	202	8	135			4
Galena Div. N. W.....	208	1230	58	266			10
Wis. Div. N. W.....	3	156	1	80		1	
Wabash.....	15	73	39	59			4
C. & E. I.....		64	91	26			2
C., M. & St. P.....	62	641	106	185			21
Wisconsin Central.....	1	3					
C., St. P. & K. C.....	17	237	42	138			4
A., T. & S. Fe.....	5	68	57	13			
Through & Special.....	11	141	47	47		20	15
Total each grade.....	486	4,219	836	1368		25	91
Total oats.....							7,025

RYE.

Railroad.	1	2	3	No Grade.
C., B. & Q.....		170	53	6
C., R. I. & P.....		96	19	2
C. & A.....		8	4	1
Illinois Central.....		4	10	1
Freeport.....		2	10	
Galena Div. N. W.....		58	36	2
Wisconsin Div. N. W.....		3	20	
Wabash.....		2	6	
C. & E. I.....		6	8	1
C., M. & St. P.....		18	41	
Wisconsin Central.....			4	
C., St. P. & K. C.....		18	19	
A., T. & S. Fe.....		14	3	
Through & Special.....		100	27	2
Total each grade.....		499	260	15
Total rye.....				774

BARLEY.

Railroad.	Bay	Brewing.	3	2	3	4	5	No Grade.	Total No. Cars by Each Road.
C., B. & Q.....		17	265	98	8		4	9,536	
C., R. I. & P.....	1	2	203	162	16		4	4,739	
C. & A.....			3					2,626	
Illinois Central.....			122	76	2			3,539	
Freeport.....		2	270	85	4			911	
Galena Div. N. W.....	1	15	622	77	10		3	5,040	
Wis. Div. N. W.....	1	1	245	310	36		12	934	
Wabash.....		1	3	1				1,924	
C. & E. I.....								1,154	
C., M. & St. P.....		5	714	237	5		13	4,487	
Wisconsin Central.....			9	12	1			30	
C., St. P. & K. C.....		22	30	108	5			2,589	
A., T. & S. Fe.....			7	8				1,811	
Through & Special.....			17	10	4		2	1,480	
Total each grade.....	3	65	2,510	1,184	91		38		
Total barley.....								3,893	
Total all grain.....								40,792	

EXPORTS FROM ATLANTIC PORTS.

The exports of breadstuffs, as compiled by George F. Stone, secretary of the Chicago Board of Trade, from Atlantic ports during the two weeks ending November 12, as compared with same weeks last year, have been as follows:

	For week ending Nov. 12.		For week ending Nov. 14.	
	1892.	1891.	1892.	1891.
Wheat, bu.....	1,956,000	2,958,000	2,652,000	2,543,400
Corn.....	930,000	581,200	780,000	760,300
Oats.....	120,000	340,100	60,000	269,500
Rye.....	32,000	303,200	79,000	395,800
Flour, bbls.....	220,000	272,300	372,000	217,700

RECEIPTS AND SHIPMENTS AT CHICAGO.

The following table, compiled by George F. Stone, secretary of the Board of Trade, shows the receipts and shipments at Chicago during October, 1892 and 1891, of seeds, hay and broom corn:

Repts.	Timothy lbs.	Clover, lbs.	Other grass seeds, lbs.	Flax-seed, bu.	Broom corn, lbs.	Hay, tons.
1892.....	5,616,011	850,918	178,360	1,538,469	4,394,945	24,259
1891.....	5,320,537	794,878	406,090	2,113,416	1,906,460	17,792
Ship'ts						
1892.....	2,329,289	1,042,855	1,708,189	1,064,575	2,231,886	2,565
1891.....	1,721,975	960,206	1,919,878	2,641,657	2,376,409	4,888

A PROTEST, A PETITION.

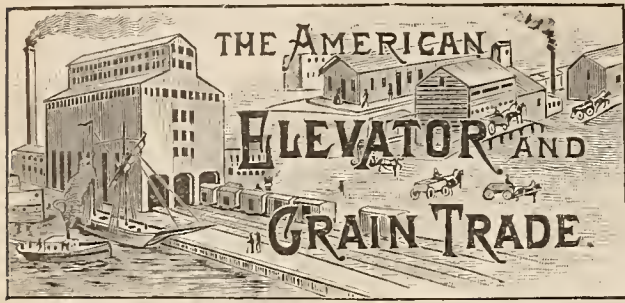
To the Traffic Managers of Railroad Companies:

We, the undersigned grain dealers, having been caused much trouble by unreasonable delay of grain in transit and also much loss by enforced idleness of capital invested and by depreciation in value of grain during delay, do hereby protest against such unreasonable delay and petition you to provide facilities sufficient to enable you to promptly transport grain at all times.

We also protest against the one sided and therefore unfair charge for delay, and petition you to allow the delay of grain in transit to be governed by the same rules as govern the delay of cars on the line where the grain is delayed.

We have received copies of the above signed by the following firms:

Gregg Bros., Grain Company, St. Joseph, Mo.
 F. H. Deane & Co., Richmond, Va.
 W. S. Sturgeon, Heyworth, Ill.
 Downing & Claesser, Hawarden, Ia.
 B. B. Connor & Co., Louisville, Ky.
 J. Kremer & Co., Arcola, Ill.
 Hunt & Booth, San Antonio, Tex.
 Brown & Co., Lovington, Ill.
 I. W. Sawin & Co., Loxa, Ill.
 J. H. Wilkes & Co., Nashville, Tenn.
 V. E. Chamberlin, Powell, Neb.
 Geo. W. Eekert, Allentown, Pa.
 Z. H. Travis, Reese's, O.
 C. H. McCoy, Lovington, Ill.
 W. Pickens, Daykin, Neb.
 Vannah, Chute & Co., Winslow's Mills, Me.
 C. H. Howard, Allentown, Pa.
 Kremer & Winkler, Arcola, Ill.
 W. D. Bettis, agent for Hunt & Booth, Orange, Tex.
 Thomas Bros., Sheffield, Ia.
 Vannerson & Co., Augusta, Ga.
 W. H. Randerson, Winnebago, Ill.
 N. A. Duff & Co., Syracuse, Neb.
 Dawson Blackman & Co., Cincinnati, O.
 C. D. Sanborn, Cushing, Ia.
 Hunt & Booth, Kansas City, Mo.
 Haworth & Spang, Georgetown, Ill.
 R. B. Delp & Co., Allentown, Pa.
 N. F. Parsons, Winnebago, Ill.
 E. D. Vorhes, Cushing, Ia.
 Warner & Everett, Falconer, N. Y.



— PUBLISHED ON THE FIFTEENTH OF EACH MONTH BY —

MITCHELL BROS. COMPANY.

(INCORPORATED.)

— OFFICE —

Howland Block, 184 and 186 Dearborn St.,
CHICAGO, ILL.

Subscription Price - - - \$1.00 per Year.

English and Foreign Subscriptions, - - 1.50 " "

English and Foreign Subscriptions may be sent to W. H. Smith & Son, 186 Strand, London, W. C., Eng.

A. J. MITCHELL, - - - Business Manager.

HARLEY B. MITCHELL, - - - Editor.

ADVERTISING.

This paper has a large circulation among the elevator men and grain dealers of the country, and is the best medium in the United States for reaching this trade. Advertising rates made known upon application.

CORRESPONDENCE.

We solicit correspondence upon all topics of interest connected with the handling of grain or cognate subjects.

CHICAGO, ILL., NOVEMBER 15, 1892.

EXPORTS OF BREADSTUFFS.

The last report of the Bureau of Statistics shows that breadstuffs valued at \$19,735,525 were exported in October, against \$24,463,499 in the preceding October; and \$70,344,724 in the four months ending with October, against \$101,158,321 in the corresponding months of 1891; and \$203,280,533 in the ten months ending with October, against \$169,488,628 in the corresponding period of last year.

In October we exported 12,619,064 bushels of wheat, and 3,539,945 bushels of corn, against 14,088,289 bushels of wheat, and 3,416,852 bushels of corn in October, 1891.

For the four months ending with October the exports were 44,379,860 bushels of wheat, 9,935,486 of corn, 570,455 of oats, 691,613 of rye, 898,678 of barley, and 5,773,146 barrels of wheat flour, compared with 64,503,187 bushels of wheat, 10,514,194 of corn, 732,428 of oats, 6,035,239 of rye, 933,541 of barley, and 3,944,101 barrels of wheat flour for the corresponding four months of 1891.

BREADSTUFFS FOR GREAT BRITAIN.

Since the corn laws of England were abolished agriculture in that country has constantly declined, until now the British farmer makes but a bare living. In fifty years the percentage of home production in total consumption of wheat has dwindled from 100 to 25. The British farmer on his good lands, with cheap labor, heavy manuring, scientific farming and high yields per acre, has harvested 18,000,000 bushels less than the 74,750,000 bushels gathered last year, and the quality is poor at that.

After so many years of struggling against adverse conditions the British farmer will see that wheat growing does not pay and will turn his attention to raising garden vegetables and live

stock, using American grain as feed for his cattle. Long ago English economists saw that they would in the future have to buy most of their breadstuffs in foreign countries and the development of agriculture at the ends of the earth was hailed with delight as affording inexhaustible supplies of the necessities of life. Once India was the land of promised plenty, then Australia, then Russia, but the broad prairies of the United States still continue to supply Johnny Bull's right and tight little isle with the major portion of the breadstuffs imported. England may as well accept the inevitable for America is the granary of the importing world.

GRAIN BY SAMPLE.

At the great grain centers of this country all grain not of the contract grades is sold by sample and much is sold by the country dealer direct to the miller by sample. The practice, which is a good one, is growing and continually extending into new territory. The legal rights and liabilities of both parties to these transactions become, therefore, of first consideration.

The mere showing of a sample is not of itself an agreement to sell by sample. The exhibition of a sample at a sale, amounts only to a representation that such sample was taken from the bulk of the commodity for sale in the usual way. There must be an agreement to sell by sample or at least an understanding of the parties that the sale is to be so. This may be inferred from circumstances. Oral evidence is also commonly admissible to prove it, but if the contract is in writing, and nothing in the writing indicates that a sample was used in making the sale, oral evidence cannot be used to prove that it was a sale by sample. To illustrate: Where a written contract was for the sale and delivery of "my packing of corn," evidence of a prior verbal agreement that the corn was to be like a certain sample was not allowed to be introduced. So where the contract for the sale of coal was in writing, and mentioned the quality of coal sold by name, but did not indicate that a sample was used or referred to, oral evidence was not permitted to be used to show a sale by sample.

The sale of goods by sample contains the implied contract that the goods sold will conform to the sample. If, however, the sample is fairly drawn from the bulk of the goods, and the bulk corresponds with the sample, but there is a defect in the bulk and in the sample itself as a part thereof, and this defect is unknown and cannot be discovered by examination, there is no implied warranty against this defect other than what there would be if the sale were not made by sample. But where, in the absence of a sample, a warranty of merchantable quality would be implied, a sale by sample excludes such implied warranty only as to such qualities as could be fairly judged of by the sample. An example of this is where a quantity of gray shirting, sold by sample, was to weigh seven pounds to each piece; but it was afterward found that the weight was made up by introducing into the fabric fifteen per cent. of China clay, and could not be discovered by an ordinary examination of the sample, and which rendered the goods unmerchantable. Where the seller takes samples from different parts of the same bulk, and then mixes up these samples, so that he may get an average sample, and purchase is made by the buyer, understanding this, there is no breach of implied warranty of correspondence of sample with bulk, if some is inferior to the sample. It is sufficient if the average quality of the bulk of the goods corresponds with the sample. There is also no warranty that the sample is what it appears to be.

Agents may, either expressly or impliedly, be given authority to sell by sample, and in all cases where an agent acts properly and within the limits of his authority, his principal will be bound, in the same manner, and to the same extent, as if he had acted personally. So, also, if an agent is invested with an ostensible authority, and credit is given to his representations and acts in respect thereto, his principal will be bound.

These rules will undoubtedly cover the case of an agent sent out to sell goods from samples though he had no express written authority, or any authority to sell by sample, if he holds out that he has, and purchases are made of him with that understanding. Likewise, a broker ordinarily has power to sell by sample and to warrant correspondence of the bulk with the sample.

The question of acceptance may also arise in case of sale by sample. The acceptance and receipt of the sample by which the sale was made, may constitute an acceptance and receipt of a part of the goods where such samples or part is to be included in the measurement or weight of the goods sold. The acceptance and receipt of a part of the goods, binds both parties to the whole bargain, subject, of course, to what has already been said about the balance of the goods necessarily corresponding with the sample, and take the contract of sale out of the statute of frauds in force in many states. And an acceptance and part-payment for part of the goods sufficient in its nature to bind the purchaser under the statute of frauds, also binds the seller to deliver the balance. But if the sample delivered is only considered as a specimen, forming no part of the commodity, the delivery and acceptance of the sample will not be sufficient to have either of these effects.

On a sale by sample the buyer acquiesces in the quality of the goods by receiving them, and making no objection. So, where a person bought goods by sample and after examination returned a portion of them as defective, and asked concession as to the rest, his right to repudiate the contract was lost.

Where goods are sold by sample the buyer has the right to inspect the whole in bulk at any proper and convenient time; and if the seller refuses to show them, the buyer may rescind the contract immediately. If upon inspection, the goods purchased by sample do not conform to the sample, the purchaser may reject them, and by notifying the seller of his decision, the goods are placed at the risk of the seller. The buyer may then either return the goods to the seller or hold them for a reasonable time at the risk, or subject to the order of the seller; and if the seller fails to make a disposition of the goods, the buyer has a right to sell them for account of the seller. Or, if he prefers to, the buyer may keep the goods, and if they have already been paid for, sue for damages on breach of the warranty implied in the contract of sale, and, if they have not yet been paid for, he may set off against a suit for the price of the goods the amount of his damages.

THE LOW PRICE OF WHEAT.

The low price of wheat has excited much comment in the public prints. The cause of the decline is by some assigned to the agitation of the anti-option bill, to the operations of speculators on the short side of the market and to the 25 per cent. duty on wheat imported. As usual the newspaper press is wide of the mark in suggesting reasons for falling prices.

The price of October wheat in Chicago declined to 69½ cents one day in that month, and although the lowest in recent years yet this price is not the lowest in twenty-eight years, as some newspapers reported. In August, 1887, wheat sold at 66½¢, in October, 1886, at 69½¢, in December, 1884, at 69½¢, in January, 1862, at 65, and in June and July, 1861, at 55 cents, in Chicago. In the four years from 1884 to 1888 wheat ranged from 66½¢ to 96 cents.

The law of supply and demand regulates the prices of grain just as it regulates the prices of other commodities. Wheat is cheap because the supply is greatly in excess of the demand. The visible supply is nearly twice as much as a year ago. The receipts at primary markets continue heavier than last year, while the exports from the seaboard are less. This large stock is owned by men who are willing to sell, who have all kinds of charges to meet, interest, storage, insurance, etc., etc. The owner of the

actual grain or the holder of a warehouse certificate must sell or the charges will eat up the value of the grain. Stocks in Europe are considerable, and foreigners who last year burnt their fingers holding grain while it dropped 30 to 40 cents a bushel are deterred by sad experience from buying any more of our grain than is necessary. Between the large supply and small demand the price of wheat sank like lead, and still remains a drug on the market.

THE NEW YORK CANAL CONVENTION.

The New York State Canal Convention held in Buffalo last month was well attended and those present seemed possessed of a determination to accomplish something in the way of improving the Erie canal. If the enthusiasm is not allowed to die out, it is very probable that the channel will be deepened and the locks lengthened.

Resolutions were read which had been adopted by the commercial exchanges of cities on the great lakes, in which the improvement of the canal was advocated and its importance to the West explained.

The convention adopted a number of resolutions in which it advised a number of things for the improvement and preservation of the canal. It was clearly shown that the lengthening of the locks, the bottoming out of the channel and the building up of the banks so as to give two feet more of water was of the greatest importance, not only to the state but to the nation. A minority report declared in favor of the United States Government improving and maintaining the canals, but it was opposed by a large majority.

The convention was a complete success and would have attracted much more attention but for other events of national importance. As it was, however, the convention has made an organized move for improvement, and the prospects for securing it are brighter than for years before. The New York state legislature was petitioned to appropriate money for these improvements, and as the Governor has again declared in favor of improving the canals, we may expect to see the plans of the convention carried out. This will mean lower rates for the rail carriers of the state, and they will of course fiercely oppose it. With longer locks and a deeper channel the canal boats would carry much more grain each trip and travel much faster, so that they could easily afford to carry grain at lower rates than they do now.

MAKING PRICES.

How and where prices for grain are made has been the source of considerable contention, and occasionally the ghost of the old worn out theory that the prices for our grain are made in Liverpool is resurrected by the country press, so we are tempted to again throw a little dirt on the long buried corpse. If the prices were made in England, it would seem natural that higher or at least as high prices would be made for Canada, a province of Great Britain, as for the United States, but it is otherwise. Great Britain imports wheat and barley from Canada, yet the price of wheat is frequently higher in this country than in Canada, and on November 3rd the price of winter wheat was 10 cents higher in Buffalo than in Toronto. The difference in the prices for barley was nearly twice as much.

The fact of the case is that the home supply and the home demand are by far the most potent factors. They overshadow all others. The foreign demand is influential, but it is only of secondary importance.

A number of long-haired theorists have frequently compiled figures to show that the farmers were losing money by selling their wheat or their corn at prevailing prices, and instead of advising them to turn their attention to the production of something else, these very practical theorists rack their imagination for

someone to blame, and usually revel in column after column of rot about the elevator ring, the wheat ring, or the commercial exchange making prices so low as to leave no profit for the poor farmer. These wonderful rings have no more influence than the cost of production in price making, which is nil.

The cost of production of grain as of other commodities, has little to do with that which is now on the market, but if the market price, which is made by the market supply and the market demand, gets below the cost of production it will curtail future production and so advance future prices. To these powerful factors in price making the farmer has paid little attention. He has gone on increasing his acreage and yield just as though the world would take any amount, however large, at good prices. Whenever over-production forces prices down the producer charges every one connected with the grain trade with causing it and the blatant demagogue leads him into deeper despair with chimerical schemes for his relief. Prices will ever be made as they are now, by market supply and market demand.

NO MORE BASE CHARGES.

The political campaign is over and the grain dealers have good cause for rejoicing thereat, for now the fusillade of foul charges which the political demagogues have kept firing at them for the past few months will cease. The farmer has voted, so there no longer remains anything to be gained by lying to this gullible class of citizens.

The emergencies of the campaign did not require the services of such unprincipled rascals, yet they forced themselves in, and by painting grain dealers and millers black as the "Prince of Darkness," amused the members of the party in whose behalf they labored. Whether or not they won any votes by their damnable practice is not to be considered. A respectable class of citizens and individual members of that class have been foully and grossly attacked. Slimy sheets that make broad claims to being great reputable dailies have repeatedly published the false charges of a self confessed criminal and swindler and fearing that these base charges would not scare the farmers into believing that grain dealers all belonged to a gang of robbers, these great sheets endorsed and magnified these charges editorially.

It is due not to a decadence of politicians, for the number that makes the end justify the means has ever been large. The change is in the direction of their energies only. These champion liars have had Minneapolis mills grinding Canadian wheat exclusively, and have made that giant devil of all devils, the Chicago Board of Trade, stalk forth with a thousand horns to the farmer's hut and rob him of the little wheat he had succeeded in producing. The "Great Wheat Conspiracy" is dead, and we hope the spirit that prompted the attack on the grain dealers is with it.

AGAIN THE ANTI-OPTION BILL.

On December 5 the Fifty-Second Congress will meet for its last session, and one of the first matters to be brought before the Senate is the Hatch-Washburn Anti-Option Bill. As will be remembered this bill has already passed the House with an enormous majority, and was only prevented from coming to a vote in the Senate by the dilatory action of some of its opponents who proposed to "talk it to death," and the promise that it should come up early in the coming session of Congress, as the first special order. Now that the elections are over, the measure stands a better chance of action on its merits or demerits than it otherwise would; and also, we may add, a better chance of veto by the President. Questions of party expediency will cut no figure now, and Mr. Harrison is a good lawyer and a clear-headed man. We believe the same fate awaits it should the bill come up in the Fifty-Third Congress. Mr. Cleveland is, like Mr. Harrison, a

clear-headed lawyer and will probably not hesitate to interpose a veto should the bill pass the Senate.

It is a little curious to note the probable effect of such a radical measure as the anti-option bill in the light of past prices. The discussion of the bill compelled the attention of thoughtful men to the question of the effect of speculation on grain prices. All the observed facts since the discussion of last spring and summer point to only one conclusion, that speculative dealings enhance prices. As an illustration may be cited the difference on the Chicago market between regular No. 2 spring and No. 2 hard. The latter has been selling at from $7\frac{1}{2}$ to $7\frac{3}{4}$ cents under December for the simple reason that it is not deliverable on contracts, although perhaps the best available grade for consumptive demand. Here is the argument of fact against the theories of Messrs. Hatch and Washburn.

STEALING GRAIN FROM CARS.

The grain receivers and railroad men of Minneapolis and the state warehouse commission have joined hands to put a stop to the stealing of grain from cars in the railroad yards of that great wheat market. The receivers and railroad companies have been trying to convict some of these thieves for years, but in vain. The persistent complaints of shortages by the shippers and the elevator companies have finally had the desired effect, and extra precautions will be taken to prevent stealing from the cars in the future.

We know of no grain center of importance that is free of these pilferers, who go about with sack and broom ostensibly to sweep out cars which have been unloaded, but vigilantly look for a loaded car which the inspector or sampler has left unlocked. These "sweepers" should not be expected to work an hour to secure a sack of grain when they can get it in a minute. They have not resisted the temptation to steal in the past and never will do so.

The cars should be swept clean by the unloaders then there would be no excuse for permitting these thieves to skulk about the yards. It would simplify matters to have the inspectors take samples of the grain or have samplers go with the inspector and require these officials to seal the car as soon as they are through with it. All yards containing loaded cars should be well guarded and the sneak thieves kept out. Until this is done the pilfering of grain from loaded cars will continue and shippers will suffer loss.

The more kicking shippers do against shortages the more active will railroad managers be in enforcing stringent regulations to put a stop to this pilfering. When you have a shortage do not fail to let it be known.

THE Montreal Corn Exchange recently resolved "That this Board views with alarm the efforts that are now being made by the United States trunk lines centering in New York and the Produce Exchange of that city, proposing the placing under the control of the Produce Exchange of New York the inspection of all Canadian grain bill of export via that port. And this Board, believing that such a course would be a great injury to the grain trade of Canada, instruct the representatives of this association appointed to confer with other delegates in New York to strongly oppose the inspection by the New York Produce Exchange of Canadian grain for export, and would recommend that the delegates of this association advocate the inspection of Canadian grain for export via United States ports prior to its crossing the frontier into American territory." The fears of the Exchange were groundless. The only desire of the trunk line association in initiating the discussion of the question was to facilitate the handling of Canadian grain for export via New York by preventing vexatious delays and detention of cars. Had the trunk lines not suggested a remedy and taken action the trouble experienced last winter would have been repeated the coming winter.

Grain Dealers' Associations.

ILLINOIS GRAIN MERCHANTS' INSURANCE AND PROTECTIVE SOCIETY.

President, F. M. PRATT, Decatur; *Secretary*, T. P. BAXTER, Taylorville; *Vice-President*, EDWIN BEGGS, Ashland; *Treasurer*, E. F. NORTON, Tallula.

GRAIN DEALERS' ASSOCIATION, OF OHIO.

President, E. W. SEEDS, Columbus, O.; *Vice-President*, Z. H. TRAVIS, Reese's; *Secretary*, J. W. McCORD, Columbus; *Treasurer*, GEO. T. CHAMBERLAIN, Columbus.

STATE GRAIN DEALERS' ASSOCIATION OF TEXAS.

President, S. F. McENNIS, Dallas; *Vice-President*, E. EARLY, Waco; *Treasurer*, J. P. HARRISON, Sheiman; *Secretary*, G. D. HARRISON, McKinney. *Directors*, J. F. McENNIS, J. P. HARRISON, E. EARLY, S. E. McASHAN of Houston and C. F. GRIBBLE of Sheiman.

NEBRASKA GRAIN DEALERS' ASSOCIATION.

President, C. H. FOWLER, Omaha; *Vice-President*, W. H. FURGESON, Hastings; *Treasurer*, N. A. DUFF, Syracuse; *Secretary*, F. C. SWARTZ, Omaha; *Directors*, C. H. FOWLER, W. H. FURGESON, N. A. DUFF, H. O. BARBER, F. L. HARRIS, G. W. WIRT, J. W. PERRY, J. A. CONNOR and F. C. SWARTZ.

GRAIN DEALERS' AND MILLERS' ASSOCIATION OF THE CUMBERLAND VALLEY.

President, S. C. WAGNER, Newville, Pa.; *Secretary*, JOHN A. MILLER, Oakville, Pa.; *Treasurer*, D. H. MILLER, Oakville, Pa.; *Executive Committee*, J. K. BEIDLER, Oakville, J. W. SHARPE, Newville; U. G. BARNITZ, Barnitz; H. K. MILLER, Huntsdale, and J. H. BRINKERHOFF of Walnut Bottom, Pa.

GRAIN SHIPPERS' ASSOCIATION OF NORTH-WEST IOWA.

President, T. M. C. LOGAN, River Sioux; *Vice-President*, H. HANSEN, Odebolt; *Secretary and Treasurer*, F. D. BABCOCK, Ida Grove; *Assistant Secretary*, F. G. BUTLER, Schaller.

Executive Committee, E. A. ABBOTT, Des Moines; J. Y. CAMPFIELD, Sac City, and T. M. CATHCART, Kingsley.

EDITORIAL MENTION

Do not let your subscription expire.

BUCKET shops are thriving in Chicago, which goes to show that the gulls are just as numerous as ever.

WE will be pleased to publish your opinions on any subject of interest to the trade, at any time. Let us hear from you.

MAXWELL KENNEDY, a prominent grain man, has been appointed Cincinnati agent of the United States Life Insurance Company.

THE grain blockade, which was so extensive, has been materially reduced, but few of the roads are yet able to give prompt service.

OF course you need a telegraph cipher. If you have none, see offer made in our department of "Valuable Books for Grain Dealers."

THE stocks of grain in Chicago elevators last Saturday evening, November 12, were 10,326,000 bushels of wheat, 6,840,000 bushels of corn, 2,364,000 bushels of oats, 431,000 bushels of rye, and 183,000 bushels of barley. Total, 20,144,000

bushels of all kinds of grain, against 8,382,000 bushels a year ago.

OUR supply of the "Grain Dealers' and Shippers' Gazetteer" will be closed out at \$3 per copy. Only a few copies remain, so if you want one write early.

ONTARIO and Quebec are shipping thousands of tons of hay to Great Britain via New York and Boston. American hay dealers should try their hand at exporting.

COMPLAINT is made that the piling up of the enormous visible supply is affecting grain insurance. Last Saturday Chicago alone had over 20,000,000 bushels of grain in her elevators.

A TOTAL of 567,586,784 acres of public lands in the United States have not yet been appropriated by settlers; 277,861,711 acres have not even been surveyed. These figures convey some idea of the great possibilities of cereal production in this country.

LATE reports from Mexico show that a number of the states will soon harvest a good crop of corn and beans, and that their surplus will be ample to supply the deficit in the states where famine has existed. This will no doubt put a stop to our corn exports to that country.

A TELEGRAM from Cincinnati announces the death in that city on November 13 of Elihu Fallis. Mr. Fallis was for many years one of the best known grain dealers in Illinois, residing at different times at Cairo and Bloomington. He was 78 years of age at the time of his death.

HAY is being sold in the Chicago market for exportation to England. The cause of this novelty in the hay trade is that in Great Britain the crop was poor, causing scarcity and high prices, while in this country the hay crop was unusually large. The difference in prices is enough to cover freight charges and leave a fair profit.

THE famine in Mexico is widespread, but one state of Mexico alone having secured any corn in the last harvest. Train loads of corn arriving are pounced upon by the hungry people and emptied in a trice. The people are not poverty stricken, but have money in hand wherewith to buy food if it only could be had.

THE complaints against the irregular dealers who go from place to place during the busy season, making track shipments, are less numerous this year than for a decade. Can it be that these scalpers are less numerous, or do the regular dealers have as much as they can handle after the scalpers have bought what they want?

IN the "For Sale" department of this issue is offered an excellent line of elevators. The firm has enjoyed a prosperous business for a number of years, and reluctantly part with the property. It is an excellent opportunity, and if any of our readers desire to secure a bargain they had better write promptly for particulars.

RECENTLY the L. Kimball Printing Company of Minneapolis have published an excellent little book, entitled "A Treatise on Mortgage Investments." It is applicable to investments generally in farm and city property mortgages, and shows how to make an intelligent and judicious selection of such securities. It will be sent post-paid for \$1.

DAVIS' Grain Tables, a new book of tables for determining the value of any number of bushels of grain, are advertised in this issue. The high price charged hitherto for tables giving the values of different quantities of grain has been a bar to their becoming more generally used. The

price of these tables as compared with those last offered to our readers is ridiculously low. The book also contains dockage tables which alone are worth the price asked. Much time and labor can be saved and many costly errors avoided by their use.

AMONG the large ships now building for the lake carrying trade are two nearly 380 feet long. That these may be loaded to their full draft deeper water is needed in our harbors and lake channels. Every shipper can indorse the action of congress in appropriating the necessary funds for improvement, and when in convention assembled they should petition for same.

A CLEAN bill of lading is given to lake shippers, but rail shippers are satisfied with the old "said to weigh" form, which was introduced before reliable grain scales were in use. The length of time they will continue to use this form depends entirely upon how strongly they will oppose its use. When carriers are compelled to give a better one we will have a new one, but not before.

A MODIFICATION of lake grain bills of lading is proposed in which the amount loaded shall be specified as being "more or less." This clause would release vessels from all liability from claims for shortages, which have been very numerous this season. Grain shippers should promptly take steps to check any move in this direction. They lose enough grain as it is with shortages in their rail shipments.

THE per capita consumption of wheat has been increasing in Western Europe during the past thirty years, having increased from 5 to 6 bushels per head. Several years ago the contrary was believed to be true, but more recently economists surmised that the consumption was increasing, and the truth was forced upon them by the inexplicable disappearance of large quantities of wheat imported into Western Europe during the past two years.

A WESTERN shipper who evidently owns some railroad stock has sent us "An Ideal Bill of Lading" which we publish elsewhere in this issue. No doubt carriers would willingly adopt it, if shippers desired it, as it makes few changes objectionable to them. Look it over and if you are well pleased with it let us hear from you. "Justice" will undoubtedly be delighted to have his views endorsed.

CHARGES of unmercantile conduct (dealing in privileges) having been preferred against Edwin Pardridge, Charles R. Barrett and William E. McHenry, they were notified to appear before the directors of the Chicago Board of Trade on November 1. To this notice they refused obedience and are seeking to enjoin the directors from taking action. The rules of the board forbid dealing in puts and calls, so they are not likely to succeed.

SOME very reputable publications are still amusing themselves by publishing column after column of cant about the worthlessness of the government crop reports. They do not point out weak points in the work and show how it can be improved, but make general charges and ask that the public be denied the only reliable crop report covering the whole country. The only impetus for such attacks must be the desire for office or the gold of grain gamblers.

THE inspection committee of the Commercial Exchange of Kansas City, Mo., has been abolished by the directors of that body, and a new committee was chosen to act as a joint inspection committee for both the Commercial Exchange and the Kansas City Board of Trade of Kansas City, Kan. It was also resolved to accept Kansas grades. By this action the Commercial Ex-

change disposes of two vexed questions, the conflict with the unreliable Missouri State Inspection Department and the loss of trade caused by the Kansas grades being lower than its own. The grades of grain dealt in on both exchanges are now the same and the country grain dealer will have no reason to discriminate against either place in making shipments.

The grain trade is again affected by a panic. Not among the European buyers as last year, but among the American producers. The farmers seem to have lost all regard for prices and are now determined to bear the market at whatever cost. It cannot be that they are badly in need of money for they sold large crops last year. It may be that the hold-your-wheat agitators have driven them into a state of stubborn blindness to all commercial conditions.

The ocean steamship companies have beaten the grain shippers at New York in the fight over the new bill of lading. The vesselmen combined and by holding out inducements to railroad companies were able to send out full cargoes and keep business moving, being assisted by certain grain shippers who cared nothing for the best interests of the trade. After fighting against heavy odds for two months the shippers were beaten, and in their eagerness to make up for lost business have forced rates up to four pence.

The reluctance with which readers have indorsed our protest against unreasonable delay of grain in transit and the onesided demurrage charge and the petition for better transportation facilities has been wonderful. We did not think dealers competent of such marked apathy in matters of vital importance to the grain trade. The number of those subscribing to the protest is a disappointment. However, we propose to send a copy of the protest and petition to the traffic manager of each railroad in hope that it may do some good, even though the number of signers is small.

ACCORDING to the report issued by the *Trade Bulletin* November 1, Europe will require more breadstuffs from this country during the next eight months than it did last year. The available European supply on that date was 18,400,000 bushels less than on the corresponding date of 1891, while the visible supply in the United States and Canada was 35,000,000 bushels greater. Europe did not have enough wheat last year and as its stock of flour and wheat, which is a fair index of the total supply is so much less than at the same time last year, we can with good reason expect heavy exports with a rise in prices.

CURING BARLEY.

A British firm of maltsters has recently sent the following regarding the curing and threshing of barley to a Canadian firm engaged in the barley trade:

"One of our great objections to your Canadian two-rowed barley is occasioned by your farmers being entirely too anxious to secure an extra bright article, and in order to obtain this they harvest while too green. The consequence is that the grain is flinty, and will not produce the yield to the brewer which it would if allowed to ripen properly. We would much prefer a little color and have the grain mellow and full of starch, than obtain a flinty, white berry. Also it is most important that the grain should be allowed to 'sweat' well in the shock, and you must give your farmers practical instructions as to the threshing of the grain. Heretofore there have been so many broken grains in your barley (that will not sprout when on the floor, and are perfectly ruinous to the malting of the grain) that all the other good qualities have been neutralized and only a second or third class article produced. Now, this state of things could be easily averted by your threshers opening their machines and threshing more slowly; and you can see the advantage of this when we tell you that it will enhance the value of the grain five or ten cents per bushel. And you must be most careful there is no admixture of six-rowed barley, as this is very damaging indeed to the trade."

RANGE OF PRICES AT CHICAGO.

The daily range of prices of grain for October delivery at Chicago since October 15 and for November delivery since November 1 has been as follows:

OCTOBER.	WHEAT.			CORN.			OATS.			RYE.		BARLEY.		FLAX SEED.	
	Low.	High.	Closing.	Low.	High.	Closing.	Low.	High.	Closing.	Low.	High.	Low.	High.	Low.	High.
15	72 3/4	73 1/4	73 1/8	41 1/4	42 1/2	41 1/2	29 1/8	30 1/8	29 1/2	55 1/4	55 3/4	55	63	111	111 1/2
16	72 3/4	73 1/4	73 1/8	41 1/4	42 1/2	41 1/2	29 1/8	30 1/8	29 1/2	55 1/4	55 3/4	55	63	111	111 1/2
17	72 3/4	73 1/4	73 1/8	41 1/4	42 1/2	41 1/2	29 1/8	30 1/8	29 1/2	55 1/4	55 3/4	55	63	111	111 1/2
18	72 3/4	73 1/4	73 1/8	41 1/4	42 1/2	41 1/2	29 1/8	30 1/8	29 1/2	55 1/4	55 3/4	55	63	111	111 1/2
19	72 3/4	73 1/4	73 1/8	41 1/4	42 1/2	41 1/2	29 1/8	30 1/8	29 1/2	55 1/4	55 3/4	55	63	111	111 1/2
20	72 3/4	73 1/4	73 1/8	41 1/4	42 1/2	41 1/2	29 1/8	30 1/8	29 1/2	55 1/4	55 3/4	55	63	111	111 1/2
21	72 3/4	73 1/4	73 1/8	41 1/4	42 1/2	41 1/2	29 1/8	30 1/8	29 1/2	55 1/4	55 3/4	55	63	111	111 1/2
22	72 3/4	73 1/4	73 1/8	41 1/4	42 1/2	41 1/2	29 1/8	30 1/8	29 1/2	55 1/4	55 3/4	55	63	111	111 1/2
23	72 3/4	73 1/4	73 1/8	41 1/4	42 1/2	41 1/2	29 1/8	30 1/8	29 1/2	55 1/4	55 3/4	55	63	111	111 1/2
24	72 3/4	73 1/4	73 1/8	41 1/4	42 1/2	41 1/2	29 1/8	30 1/8	29 1/2	55 1/4	55 3/4	55	63	111	111 1/2
25	72 3/4	73 1/4	73 1/8	41 1/4	42 1/2	41 1/2	29 1/8	30 1/8	29 1/2	55 1/4	55 3/4	55	63	111	111 1/2
26	72 3/4	73 1/4	73 1/8	41 1/4	42 1/2	41 1/2	29 1/8	30 1/8	29 1/2	55 1/4	55 3/4	55	63	111	111 1/2
27	72 3/4	73 1/4	73 1/8	41 1/4	42 1/2	41 1/2	29 1/8	30 1/8	29 1/2	55 1/4	55 3/4	55	63	111	111 1/2
28	72 3/4	73 1/4	73 1/8	41 1/4	42 1/2	41 1/2	29 1/8	30 1/8	29 1/2	55 1/4	55 3/4	55	63	111	111 1/2
29	72 3/4	73 1/4	73 1/8	41 1/4	42 1/2	41 1/2	29 1/8	30 1/8	29 1/2	55 1/4	55 3/4	55	63	111	111 1/2
30	72 3/4	73 1/4	73 1/8	41 1/4	42 1/2	41 1/2	29 1/8	30 1/8	29 1/2	55 1/4	55 3/4	55	63	111	111 1/2
31	72 3/4	73 1/4	73 1/8	41 1/4	42 1/2	41 1/2	29 1/8	30 1/8	29 1/2	55 1/4	55 3/4	55	63	111	111 1/2
1	72 3/4	73 1/4	73 1/8	41 1/4	42 1/2	41 1/2	29 1/8	30 1/8	29 1/2	55 1/4	55 3/4	55	63	111	111 1/2
2	72 3/4	73 1/4	73 1/8	41 1/4	42 1/2	41 1/2	29 1/8	30 1/8	29 1/2	55 1/4	55 3/4	55	63	111	111 1/2
3	72 3/4	73 1/4	73 1/8	41 1/4	42 1/2	41 1/2	29 1/8	30 1/8	29 1/2	55 1/4	55 3/4	55	63	111	111 1/2
4	72 3/4	73 1/4	73 1/8	41 1/4	42 1/2	41 1/2	29 1/8	30 1/8	29 1/2	55 1/4	55 3/4	55	63	111	111 1/2
5	72 3/4	73 1/4	73 1/8	41 1/4	42 1/2	41 1/2	29 1/8	30 1/8	29 1/2	55 1/4	55 3/4	55	63	111	111 1/2
6	72 3/4	73 1/4	73 1/8	41 1/4	42 1/2	41 1/2	29 1/8	30 1/8	29 1/2	55 1/4	55 3/4	55	63	111	111 1/2
7	72 3/4	73 1/4	73 1/8	41 1/4	42 1/2	41 1/2	29 1/8	30 1/8	29 1/2	55 1/4	55 3/4	55	63	111	111 1/2
8	72 3/4	73 1/4	73 1/8	41 1/4	42 1/2	41 1/2	29 1/8	30 1/8	29 1/2	55 1/4	55 3/4	55	63	111	111 1/2
9	72 3/4	73 1/4	73 1/8	41 1/4	42 1/2	41 1/2	29 1/8	30 1/8	29 1/2	55 1/4	55 3/4	55	63	111	111 1/2
10	72 3/4	73 1/4	73 1/8	41 1/4	42 1/2	41 1/2	29 1/8	30 1/8	29 1/2	55 1/4	55 3/4	55	63	111	111 1/2
11	72 3/4	73 1/4	73 1/8	41 1/4	42 1/2	41 1/2	29 1/8	30 1/8	29 1/2	55 1/4	55 3/4	55	63	111	111 1/2
12	72 3/4	73 1/4	73 1/8	41 1/4	42 1/2	41 1/2	29 1/8	30 1/8	29 1/2	55 1/4	55 3/4	55	63	111	111 1/2
13	72 3/4	73 1/4	73 1/8	41 1/4	42 1/2	41 1/2	29 1/8	30 1/8	29 1/2	55 1/4	55 3/4	55	63	111	111 1/2
14	72 3/4	73 1/4	73 1/8	41 1/4	42 1/2	41 1/2	29 1/8	30 1/8	29 1/2	55 1/4	55 3/4	55	63	111	111 1/2
15	72 3/4	73 1/4	73 1/8	41 1/4	42 1/2	41 1/2	29 1/8	30 1/8	29 1/2	55 1/4	55 3/4	55	63	111	111 1/2

Timothy seed advanced in the week ending November 5 owing to a belief that the crop was short and through buying for future wants. Contract grade, cash to year delivery, ranged at \$1.65 up to \$1.81. The market for flaxseed was strong and prices improved somewhat. Clover was quiet but scored a good advance, November delivery improving from \$6.50 to \$7.20, owing to reports of a light crop.

The market for timothy continued strong during the week ending November 12, declining gradually toward the end, prime contract selling from \$1.90 to \$1.84. December clover sold from \$7.20 early to \$7.75 later. The trade in flax was fair and the movement heavy. Values declined somewhat.

CHICAGO INSPECTION OF HAY.

No. 1 TIMOTHY—Shall be timothy, and not more than one-fifth of other tame grasses, mixed; good color, well cured and free from must.

No. 2 TIMOTHY—Shall be timothy, and not more than one-third of other tame grasses, mixed; good color, well cured and free from must.

MIXED HAY—Shall consist of tame grasses, mixed; good color, well cured and free from must.

PRIME PRAIRIE—Shall be purely upland hay, free from swale grasses; good color, well cured and free from must.

No. 1 PRAIRIE—Shall be upland and midland prairie hay; good color, well cured and free from must.

No. 2 PRAIRIE—Shall be swale and slough hay, either wholly or mixed with upland; good color, well cured and free from must.

NO GRADE HAY—All kinds of hay, badly cured, stained, or in any way out of condition; the certificate of inspection stating whether it is tame or prairie hay.

All certificates of inspection shall show the number of bales and grade in each car or lot inspected and plugged; and when for shipment the final inspection and plugging, in order to ascertain the sound condition of each bale, shall take place at the time of shipment.

The fees for inspection shall be \$3 per car, to be divided equally between the buyer and the seller.

NOT GUIDED BY COMMERCIAL CONDITIONS.

The great rush with which farmers in the United States have been harvesting their wheat indicates clearly that the farmers have no knowledge whatever of commercial conditions, and are not guided to any extent in their actions by a knowledge of statistical or other conditions concerning wheat. Last fall a few agitators at the head of a farmers' organization in that country, succeeded in making a great many farmers believe that they would make money by holding their wheat. Many took this unfortunate advice, as is shown by the fact that a smaller proportion than usual of the crop was marketed in the fore part of the year. Later in the year they were obliged to sell at much lower prices than they could have

obtained in the fall. This year, when prices are very low and commercial conditions never more favorable for an advance, the farmers are rushing in their wheat with unprecedented vigor. They seem to be acting as though the grain would become a total loss on their hands if they did not get rid of it at once. Their foolish leaders of a year ago have deserted them, and having no knowledge of present commercial conditions of the wheat market, and remembering only their losses from holding last year, they are getting rid of the stuff as fast as possible.—*Winnipeg Commercial.*

DROPPED ON THE BOARD.

A Board of Trade man brought his bright 8 year old girl down town with him a day or two ago and was stopped in the lower hall of the great building by a friend who detained him several minutes. Proceeding to resume his steps he looked about for his little one and found her on her hands and knees looking eagerly about her in the semi-darkness of the early morning.

"Why, my dear child, what have you lost? What are you doing down there upon the floor?"

"Oh, papa," she cried, with an air of disappointment and a pout upon her sweet lips; "papa," she repeated, "some one's been here ahead of me and got every bit of it."

"Got what, my dear?" asked the father soothingly, for the child was about to cry.

"Papa, y—you know, you said, you s—s—said to mamma this mornin' at t—the breakfas' table t—that lots o' money had b—been d—dropped on the Board er Trade yest'day 'n' I th—thought I—I'd find some, but some-body's p—picked it up every p—p—piece." Here the little girl broke down completely, and she sobbed convulsively.

It demanded something more substantial than sympathy to dry the tears of the mourner.

Wheat amounting to 16,783 bushels was imported in September, against 609 bushels the preceding September; and during the nine months ending with September 1, 1902, 380 bushels, valued at \$691,550, was imported; compared with 316,901 bushels, valued at \$223,951, during the corresponding months last year. Of foreign wheat 1,740,007 bushels, valued at \$1,278,730, was re-exported during the nine months ending with September; against 445,498 bushels, valued at \$351,999, during the corresponding months of 1891.

Barley amounting to 27,927 bushels, valued at \$13,269, was imported in September; against 8,993 bushels, valued at \$4,371, in September, 1891; and during the nine months ending with September 1902, 478 bushels, valued at \$472,520, was imported, compared with 951,620 bushels, valued at \$548,054, during the corresponding months last year. Of foreign barley we re-exported during the nine months 86,505 bushels, valued at \$46,531; against 311,038 bushels, valued at \$208,092, during the nine months ending with September, 1891.

Flaxseed amounting to 395,328 bushels was exported in September, against 178,311 bushels the preceding September; and during the nine months ending with September 1, 1902, 813 bushels, valued at \$2,041,361, was exported; compared with 599,912 bushels, valued at \$690,307, during the corresponding months of last year. No flaxseed was imported in September, against 11,990 bushels the preceding September; but during the nine months ending with September 46,794 bushels, valued at \$55,459, was imported; compared with 560,530 bushels, valued at \$654,158, during the corresponding months of last year. No imported flaxseed was re-exported in the nine months and only one bushel, valued at \$2, was re-exported in the corresponding nine months ending with September, 1891.

Hay amounting to 2,564 tons, valued at \$39,934, was exported in September; against 2,019 tons, valued at \$34,614, in the preceding September; and during the nine months ending with September 26,233 tons, valued at \$430,135, was exported; compared with 20,370 tons, valued at \$347,317, during the corresponding months of last year. The imports of hay in September were 5,059 tons, valued at \$50,126; against 5,327 tons, valued at \$44,245, in September, 1891; and during the nine months ending with September 59,253 tons, valued at \$584,247, was imported; against 43,810 tons, valued at \$323,400, during the corresponding period of 1891. Of foreign hay 151 tons, valued at \$1,387, was re-exported in the nine months; against 9 tons, valued at \$73, in the corresponding nine months ending with September, 1891.

ELEVATOR AND GRAIN NEWS

Albee, S. D., wants a grain elevator.

An elevator is being built at Wilder, Minn.

Another elevator is talked of at Ashton, Ia.

A starch factory is talked of at Sioux City, Ia.

A wheat blockade exists in Eastern South Dakota.

Fred Brandt is building a granary at Selma, Minn.

Peter Hansen will build an elevator at Logan, Kan.

The old elevator at Wauseon, O., is being torn down.

Joseph Reichert will build an elevator at Belleville, Ill.

R. C. Smith, grain dealer at Holly, Mich., has sold out.

W. R. Lamb will build a cotton-seed oil mill at Bowie, Tex.

Herman Swartz will build an elevator at Frankfort, Kan.

The grain house at Fairfield, Ill., is undergoing repairs.

Heising Bros. propose to build an elevator at Omamee, N. D.

Another Alliance warehouse is talked of at Tyler, Minn.

Thorpe Bros. are building an elevator at Harrison, Minn.

Work on the new elevator at Loxa, Ill., is progressing finely.

Norcross Bros., grain dealers at Adams, Neb., have sold out.

Hodges & Hyde, grain dealers at La Crosse, Wis., have sold out.

F. E. Phipps is building a grain warehouse at Hartland, Minn.

William W. Klock, grain dealer at Bradshaw, Neb., has sold out.

The "Farmers' Elevator" at Fergus Falls, Minn., has been opened.

Davidson Bros. have built a 10,000-bushel elevator at Mahomet, Ill.

Scott, Suffel & Co., grain dealers at Hazard, Neb., have sold out.

G. T. Hodges is building a grain elevator at Shepherdstown, W. Va.

Work has been begun on another grain elevator at Ortonville, Minn.

The "Farmers' Alliance" will build an elevator at Spring Valley, Ill.

Thieves recently stole 1,100 pounds of grain from a car at Spangle, Wash.

J. B. Schmid of Springfield, Minn., is having a feed mill put in his elevator.

The elevator of the Porter Milling Company at Winona, Minn., is being enlarged.

W. W. Mitchell, grain dealer and storekeeper at Wood River, Neb., has sold out.

A brewery will be built at St. Joseph, Mo., by the St. Joseph Brewing Company.

P. J. Bennett & Co., grain dealers at Evans, Mich., have dissolved partnership.

The St. Paul & Kansas City Grain Company will build an elevator at Cambridge, Ia.

The elevators at Hartley, Ia., in one day recently handled 10,000 bushels of grain.

C. A. Bugge & Co. have bought and will repair the elevator at North Branch, Minn.

Mrs. E. V. Hill, grain dealer at Clarion, Ia., has been succeeded by D. L. Lyons & Co.

A 20,000-bushel elevator is being built at Pense, Man., by the Western Milling Company.

Archibald Campbell of Chatham, will build an elevator and mill at Toronto Junction, Ont.

J. Q. Bell & Co., grain dealers at Girard, Kan., have been succeeded by Bushy & Smith.

A. C. Davis & Co. of Topeka, Kan., have nearly completed their 200,000-bushel elevator.

Farmers in Adams Co., Neb., are storing grain in elevators at Hastings for higher prices.

J. D. Ellis and Dr. Rockwell are building at West Superior, Wis., a grain elevator to be equipped with

special machinery for cleaning, mixing and drying wheat and other grains.

The cargo of the steamer W. H. Gilcher is reported to have overrun 300 bushels at Buffalo.

T. S. Gilliland has placed an oat clipper and cleaner in his grain warehouse at Van Wert, O.

The Howland Distillery Company has been incorporated at Chicago with \$50,000 capital.

C. W. Gragg, grain dealer and miller at Dennis, Kan., has been succeeded by Gragg & Cline.

J. J. Stone, grain dealer and storekeeper at Harper, Ia., has been succeeded by Stone Bros.

Langevin & Lemay, dealers in grain and hay at Montreal, Que., have dissolved partnership.

Max Shoenthal, dealer in malt and hops at New York, N. Y., has failed. Liabilities \$250,000.

From fifty to seventy-five loads of grain are daily marketed at the elevator at Watkins, Minn.

Rickart & Farrell, commission grain dealers at St. Louis, Mo., have dissolved partnership.

New power grain shovels have been placed in the "Pettit Elevator" at Minneapolis, Minn.

Parrish & Lindsay of Brandon, Man., have bought the elevator of D. P. McLaurin at Beresford.

The Carleton Grain Company of Carleton, Neb., has made repairs in the elevator at that place.

A new elevator has just been completed at Fullerton, N. D., by the Lighter Elevator Company.

Wiess & Ludemann, grain dealers at Parkersburg, Ia., have been succeeded by Kennard & Griffin.

For the first time in seven years the 50,000-bushel elevator at Halshead, Kan., is filled with wheat.

An elevator has been completed at La Junta, Colo., by the La Junta Milling and Elevator Company.

J. J. Wilson of Algona, Ia., has adopted the Dickey Overblast Separator for his this fall's cleaning.

Vaughn, Hughes & Co., dealers in grain and hay at Great Falls, Mont., have dissolved partnership.

So scarce are box cars in Eastern Oregon that grain shippers have had to press coal cars into service.

R. N. Hughes & Co. have bought the Moise-Barbour elevator and mill at Louisville, Ky., for \$10,000.

The Quana Mill and Elevator Company has been incorporated at Quauah, Tex., with \$50,000 capital.

Slay & Oakes, dealers in grain and wire at Amarillo, Texas, have been succeeded by Oakes & Callaway.

Moseow, Idaho, has this season received over 600,000 bushels of grain from farmers, and more is coming.

Houstain Bros. of Minneapolis, Minn., are building an engine house for the "Midway Elevator" in that city.

A patent on a grain separator, No. 39,949, has been granted by the Canadian Patent Office to C. Lampitt.

F. H. Bingenheimer is building at Maudan, N. D., a grain house 20x65 feet, with space beneath for lumber.

A grain door for cars has been patented in Canada by W. F. Lyon and W. R. Champney. Its number is 39,790.

A malt house will be built at Oswego, N. Y., by Francis Perot's Sons Malting Company of Philadelphia, Pa.

Seeley, Son & Co., architects and builders of elevators of Fremont, Neb., have built a chicory house at O'Neill, Neb.

Minneapolis, Minn., received in October more than 10,500,000 bushels of wheat, the largest quantity on record.

Grain is piled twenty-seven sacks deep on the platforms of the warehouses in the Palouse country of Washington.

The Farmers' Trading Company of Waverly, Neb., has leased a 20,000-bushel elevator and placed John Tiger in charge.

J. H. Acker has bought the interest of his partner, Mr. Sands, in their elevator at Tomah, Wis., and will operate it alone.

Seeley, Son & Co., elevator architects of Fremont, Neb., have contracted to build a couple of grain elevators in Colorado.

Ira M. Gilley of Carroll, Ia., has let a contract to J. M. Harris of Des Moines to erect a 15,000-bushel house at Kalston, Ia.

Stewart & Moeller, dealers in grain, coal and lumber at Reinbeck, Ia., have been succeeded by Stewart, Moeller & Co.

Several grain elevators are projected in Rochester, N. Y., to be built in connection with the Rochester & Pittsburgh Railroad.

The starch factory at Hankinson, N. D., made forty-eight tons this year, against seventy tons last year. Potatoes are too dear this year for extensive operations.

The factory consumes 1,500 bushels of potatoes per day, and farmers near by get a stiff price for the starchy tuber.

Babcock & Grannis Bros., a new firm at Vernon Center, Minn., will build a 15,000-bushel elevator to be run by horse power.

Algernon Fair has brought suit against the Elevator Milling Company of Springfield, Ill., for \$5,000 owed on wheat delivered.

Handley & Martimore of Rugby, Ill., were the first to shell a carload of corn in that section. The ear sold for 33 cents a bushel.

The International Elevator Company of New York, N. Y., has bought the two floating "McCord Elevators" in New York harbor.

Thos Cochrane & Co. have put in one of the Dickey Manufacturing Company's Overblast Separators in their house at Ong, Neb.

The W. H. Purcell Company, manufacturing barley malt at Chicago, has increased its capital stock from \$250,000 to \$500,000.

Seeley, Son & Co., architects and builders of grain elevators of Fremont, Neb., have recently completed an elevator at Hastings, Ia.

The Peter Heid Grain Company of Appleton, Wis., proposed to buy the elevator at Ripon, but the negotiations were not completed.

E. W. Hedges, of Hedges & Wiegand, has bought the half interest of Dill Wiegand in the grain elevator at Ashville, Pickaway Co., O.

A. E. Roberts & Bro. of Cozad, Neb., have lately put in one of the A. P. Dickey Manufacturing Company's No. 6 Overblast Separators.

Jas. S. Rowe, the grain dealer of Wilton, Ia., has moved his feed mill from his elevator into another building and will run it by steam.

Both the "Farmers' Elevator" and the "Northern Pacific Elevator" at Almota, Wash., are full of wheat and more is being marketed.

M. S. Ehrnfeld of Kanopolis, Kan., has recently bought a Victor Corn Cleaner of the Barnard & Leas Manufacturing Company of Moline, Ill.

The Wabash Railroad Company has withdrawn its suit against the Toledo Elevator Company at Toledo, O., which is a victory for the latter.

A 300,000-bushel elevator will be built at St. John, N. B., by the Canadian Pacific Railway Company all negotiation having been completed.

A 40-pounder rice mill is being built at Lake Charles, La.; the machinery is furnished by the Nordyke & Mamon Company of Indianapolis, Ind.

J. D. Wicks has bought a half interest in the Carleton Grain Company of Carleton, Neb. The firm is thoroughly overhauling its elevator property.

An elevator with a gas engine as motive power is being built at Willow Creek, N. D., increasing the storage capacity at that point to 125,000 bushels.

M. J. Travis of Concordia, Kan., has recently bought a Victor Corn Sheller and Cleaner of the Barnard & Leas Manufacturing Company of Moline, Ill.

The Cheatbam-Baker Company is handling grain at thirty-five stations in Oregon and Washington, with headquarters at Pullman and Tacoma, Wash.

The ruins of the "Illinois Elevator" at Chicago, which collapsed recently, have been removed and work has begun on a new house of better construction.

T. E. Stumbaugh & Co. are a new firm at Deer Creek, Ill., who will buy grain and stock and sell hard and soft coal. Mr. Stumbaugh is well known there.

The A. P. Dickey Manufacturing Company's Overblast Separators have been put in elevators at Appleton, Ill.; Valley City, N. D., and Indianola, Neb.

Railsback Bros. of Ashland, Neb., have put in a complete outfit of elevator machinery made by the Barnard & Leas Manufacturing Company of Moline, Ill.

Head & Bossons of Portage la Prairie, Man., have recently completed a 30,000-bushel elevator at Holland, and another of the same capacity at Rathwell, Man.

E. R. Ulrich & Son of Arapahoe, Neb., have put in a complete outfit of elevator machinery furnished by the Barnard & Leas Manufacturing Company of Moline, Ill.

The Mt. Pulaski Grain Company of Mt. Pulaski, Ill., has recently bought a Cornwall Corn Cleaner of the Barnard & Leas Manufacturing Company of Moline, Ill.

F. C. Roberts of Wagoner, Ind. Ter., has recently bought a complete outfit of grain elevator machinery of the Barnard & Leas Manufacturing Company of Moline, Ill.

For breaking into and robbing grain cars in the Big Four yards at Indianapolis, Ind., Benjamin Gentile, a dissolute character, was recently arrested and placed in jail.

Seventy-one farmers in the vicinity of New London, Minn., who were ensnared into the Scandinavian Elevator Company and swindled by C. C. Wolcott, are defendants in the suits brought by the assignee of the defunct com-

pany to compel payment on the stock subscribed under the double liability law. Evidence has been produced showing that Wolcott is a villain of the deepest dye.

Burglars entered the office of G. G. Vreeland at Juniata, Neb., recently and blew the doors off the safe, but got nothing as the grain dealer had all the ready cash in bank.

Grain men at New Orleans view with unconcern the strike of grain trimmers because unskilled and non-union labor can be employed in place of those who quit work.

The farmers' elevator at Brandon, Minn., was recently completed. A gasoline engine drives the machinery. The buyers for the house are Chr. Thoreson and Anton Strom.

Electric lights have been installed in the elevators at Duluth, Minn. The plant has a capacity of 800 lights and is furnished with a 100-horse power compound steam engine.

W. S. Russell of Allentown, Ill., is receiving grain from farmers within a radius of nine miles. Although he has shipped considerable grain his elevator is still well loaded.

Hayward & Co. started their new elevator at Rosedale, Kan., November 3. Its storage capacity is 100,000 bushels, and its daily handling and cleaning capacity 50,000 bushels.

Creditors of the Frye Grain Company of Rochester, N. Y., have a long wait before them, as the dissolution of the broken firm is involved in a maze of legal technicalities.

The Jay Grain Company of Elwood, Ind., has recently bought two Victor Corn Shellers and one Victor Cleaner of the Barnard & Leas Manufacturing Company of Moline, Ill.

Malcolm McLean, agent at Delhi for the Interstate Grain Company of Minneapolis, Minn., disappeared recently with \$1,000. His bondsmen have settled with the company.

Mr. Houghton of Whitewater, Wis., has for the past three months been overhauling and repairing his elevator and warehouse and placing new machinery to clean grain and grind feed.

The Anchor Line houses at Erie, Pa., have up to October 28 elevated over 13,000,000 bushels of grain, while the business for the entire season last year was only 11,000,000 bushels.

Since beginning business three months ago the Peter Heid Grain Company of Appleton, Wis., has handled 100,000 bushels of grain and will handle 300,000 bushels more this season.

Thirty elevators and mills in Genesee Co., Mich., received in August and September 276,197 bushels of wheat, and in the entire state 3,052,172 bushels was marketed in those two months.

The elevator men at Nelson, Neb., and Yeddo, Ind., have adopted the Dickey warehouse grain cleaners for their houses, made by the A. P. Dickey Manufacturing Company of Racine, Wis.

The Baltimore & Ohio, Pennsylvania and Reading Railroads have agreed to maintain tariff rates on grain entering Philadelphia, and furthermore refuse to pay elevator and floating charges.

Chas. Counselman & Co. of Chicago, have placed in their house at Lebanon, Kan., a complete outfit of elevator machinery furnished by the Barnard & Leas Manufacturing Company of Moline, Ill.

Farmers west of Winnipeg, Man., had, up to November 1, delivered 68,000,000 bushels of wheat, of which 48,000,000 has been shipped out. Considering the heavy movement cars are in good supply.

A formal transfer of the "Union Pacific Elevator" at Armstrong, Neb., was recently made by Frank H. Peavey & Co. to the Midland Elevator Company in consideration of \$1 per annum for 99 years.

J. W. Shaler of Chelsea, Ia., received every day from July 4 to October 13 not less than fifteen loads of grain, and on many days he received a greater number. He has shipped more grain this season than ever before.

At Saticoy, Cal., a warehouse 400 feet long owned by the Southern Mill & Warehouse Company, is full of grain, sheds and a l. clear to the roof, and farmers have been requested not to haul their beans or corn as it cannot be stored.

The Kansas Commission Company has been incorporated at Wichita, with a branch at Kansas City, Kan. Capital stock, \$5,000; directors, R. Nichols, Wichita; H. D. Mancey, Eureka; James D. Paxson and J. W. Billingslee, Peoria.

A. C. Davis & Co. of Topeka, Kan., have recently bought for their new elevator three No. 14 Barnard Elevator Separators, with a combined capacity of 9,000 bushels an hour, of the Barnard & Leas Manufacturing Company of Moline, Ill.

Owing to the heavy receipts of grain at New York the New York Central Lighterage Company has given notice that it may become necessary to float grain. The "New York Central Elevator" and the "West Shore Elevator" are nearly full of grain. All grain floated, except grade

of rejected, no established, unmerchantable and cargo lots of identity preserved, and odd grades of which none is in elevator will be held afloat at the customary rates for grain held afloat on storage.

While unloading wheat at N. S. Bristol & Co.'s elevator at Hay Springs, Neb., November 5, a farmer slid out at the end of his wagon into the grain pit, but being long in the legs he scrambled out uninjured.

J. H. Lyle and E. G. Chapman of Minneapolis, Minn., have formed a partnership to do a grain and flour commission business. Neither is new to the trade, and Mr. Chapman for the past two years has been manager of the City Elevator Company.

Harry Wambold's interest in the Wisconsin Malt & Grain Company of Appleton, has been bought by Bertin Ramsay and C. W. Mory, the other members of the company. The new malt house of the company at Appleton, Wis., has just been completed.

The Gilbert Grain Company has brought suit against Joslin & Co. at Minneapolis, Minn., to recover \$147.96 for 661½ bushels of wheat, for which they agreed to pay 36½ cents per bushel less \$93.52 freight charges from Langdon, N. D., to St. Paul.

A wire rope is used at Deadman on Snake River, Wash., to carry grain from the elevated tableland to the river bank, 1,900 feet below and 6,200 feet distant. Three men with this carrier transport 145 sacks of wheat per hour, their labor costing only 60 cents.

The F. K. Moody Grain Company has been incorporated at Armourdale, Kan. Capital stock \$10,000; directors G. W. Gulley, Argentine; H. H. Reynolds, Kansas City, Kan.; F. K. Moody, W. G. Hazeltine and Jay Coatesworth of Kansas City, Kan.

C. Miller of Square Butte, N. D., planted corn and harvested 60 bushels per acre. A large number of the ears are eleven inches long. Several other farmers in the vicinity of Mandan, N. D., got good crops of that cereal, and their neighbors regret that they did not plant corn.

Seeley, Son & Co. of Fremont, Neb., have just completed an elevator at Oklahoma City, O. T., named the "Santa Fe Elevator" by permission of the officials, who declared it was the finest elevator on their line. In twenty days from the time the materials were on the ground the house was completed.

By the robbing of a safe in Patten Bros.' store at Roswell, S. D., October 14 W. W. Cargill of La Crosse, Wis., lost \$626; S. Y. Hyde of La Crosse, \$235, and the Madison Elevator Company of La Crosse, \$500. The money had been placed in the safe by the local grain agents of the three firms.

The new 1,800,000-bushel elevator built by the Boston & Maine Railroad Company at Charlestown, Mass., was completed November 15 at a cost of \$500,000. Ample trackage for ears and berths for vessels have been provided. G. W. Gould of the "Hoosac Elevator" has taken charge of the new house.

Owing to the great weight of the immense amount of grain stored in the "Santa Fe Elevator" at Argentine, Kan., near Kansas City, the elevator legs got out of order and a groundless report spread that the house was about to collapse. The settling of the house was natural and the elevators have since been overhauled.

An urgent demand is growing for heavy oats for oatmeal mills; and the mills at interior points have scoured the country in their vicinities and picked up many earloads that would otherwise have been shipped to central markets. Clippers are busy. Heavy oats are selling at an unusually large premium over light weight.

W. W. Ogilvie of the Ogilvie Milling Company after a recent trip through the section of Manitoba penetrated by the Souris branch of the Canadian Pacific Railway, said: "I know of no country so well supplied with elevators, there being on an average three to five at almost every station, which makes desirable wheat markets."

The *Alert* says the North Dakota farmers want to deal with competing wheat buyers face to face, and that the sending of wheat to be sold for the farmers' account without resource is in many respects as disastrous as surrendering it to the elevators. The complaint is that there is too little competition.—*Minneapolis Market Record*.

Rates on grain from Ontario points to Montreal for export have been increased by the Canadian Pacific and the Grand Trunk Railways as follows: From Toronto and east to Montreal 12½ cents per 100 pounds; west of Toronto to London, St. Thomas, etc., 14 cents; Western and Northern Ontario 16 cents. These charges are exclusive of Montreal terminals.

The Miller Grain Elevator Company has brought suit in the Circuit Court at St. Louis, Mo., to recover \$1,086, the balance alleged to be due on a contract by which the Farmers' Elevator Company agreed to pay the Miller Elevator Company ½ cent a bushel on all grain sent to it. Payment was made on 217,906 bushels, but the sum sued for is yet due on 217,270 bushels.

The following letter from the Canadian Pacific Railway Company has been posted in the Winnipeg grain exchange rooms: Cars of grain billed to New York and Boston for export that may miss grade in inspection at Winnipeg, the company will hold such cars for disposal by owners on track for twenty-four hours free of charge, after which car rental at rate of \$2 per car per day will

be charged for detention, reserving the right to send the grain forward to "Fort William Elevator" for storage providing directions for disposal are not forthcoming after three days' notice is given that the grain is not of grade permitted to be shipped to New York and Boston for export.

The "Richmond Elevator" and the "Brown Elevator" at Buffalo, N. Y., are being overhauled in readiness to receive grain, after having stood idle for two and eight years respectively. The two elevators can each store 250,000 bushels, and if used the contents would have to go east by canal as they have no rail connection. A grain blockade is feared by the elevator pool.

An injunction temporarily restraining certain parties in Codrington county from building a line of elevators on the right of way of the Great Northern Railroad was secured by Solicitor Dodge for the railroad in Judge Edgerton's court at Sioux Falls, S. D., October 27. A motion to make the injunction permanent will be heard at the next sitting of the United States Court at Sioux Falls.

Mahtons Watkins, senior member of the grain firm of Watkins Bros. of Kokomo, Ind., was arrested October 29 on eight indictments charging him with grand larceny in two cases and embezzlement as a warehouseman in the remaining six. The firm failed last June with liabilities of \$20,000 and assets of \$9,000. It was found that Watkins had sold 9,000 bushels of wheat stored in his elevator at Terre Haute.

H. J. Coon & Co., members of the Chicago Board of Trade and receivers and shippers of corn and oats, suspended business October 24. The failure was due to the decline in corn and oats of which Mr. Coon had bought heavily. Liabilities \$20,000. For twenty-five years Mr. Coon had been doing a conservative business on the Board of Trade and was much respected. No doubt he will soon resume business.

The total elevator storage capacity at Minneapolis, Minn., is 18,180,000 bushels, having been increased during the past year by the Great Western Elevator Company 500,000; Midway Elevator Company, 225,000; Interior Elevator Company, 500,000; Empire Elevator Company, 500,000; City Elevator Company, 250,000; Interstate Grain Company, 200,000 bushels. One 200,000-bushel house was demolished.

A million bushel elevator will be built at some terminal point on the Pacific Coast by the Farmers' Alliance and Industrial Union of Washington and the Warehouse Association of Eastern Washington and Western Idaho, now operating and having in process of construction 35 warehouses. This large elevator will afford the much needed facilities for export shipments in cargo lots and relieve the warehouses up the country.

The suit brought against the old Board of Trade firm of John T. Lester & Co. at Chicago several years ago, by Thomas J. Sutherland, has lately been revived in Judge Hutehinson's court. The plaintiff sued to recover \$18,540 01 margins on grain deals, he having paid \$24,000 and received \$6,000. John T. Lester is dead; the other defendants are Charles Schwartz and E. K. Willard. The plaintiff has been given a verdict for \$17,442.73.

Charles Nobbe has sold his interest in the grain elevator at this place to Martin Brown. Mr. Brown will take possession on the 20th inst. We wish Mr. Nobbe ease and comfort in his old days. Many farmers and others regret much to see Mr. Nobbe retire from the grain business. He will continue the lumber business here. We also welcome Mr. Brown to this place, and believe in time the farmers will find an enterprising man, one who will bid all that he can afford to pay for grain at all times, and speaking from our own knowledge, they can rely implicitly on his honesty and integrity. His son will be in charge of the business.—*Farmersville, Ill., Correspondence Girard Gazette*.

Manager Miller of the Northern Pacific Railway Company writes as follows about the North Dakota platform law: "I am glad to see that we are getting credit in the newspapers for putting in the farmers' loading platforms. We expect to keep up the good work and expect full credit for doing this voluntarily. We have never admitted the constitutionality of the platform act, nevertheless we propose to the extent of our facilities to give the farmers of North Dakota every opportunity to decide how, when and where they will ship their grain. If they do not like the facilities already furnished them by the elevators they will have a chance to do their own loading and try the commission men to the extent that we are able to furnish cars."

Pegram & Bro., dealers in grain, farm machinery and wheel goods at Lincoln, Ill., with elevators at Lawndale, Burtonview, Broadwell and Lake Ford, besides two at Lincoln, failed at 9 p. m., November 1, when a bill of sale and warranty deed were given E. L. Pegram, conveying to him all the firm's property in consideration of \$90,000 which had been loaned by him to the firm, of which he was business manager. The firm was established thirty-six years ago by Capt. W. B. Pegram, highly respected for his integrity, and when he died, several years ago, his sons came into a prosperous business, which they handled judiciously until two years ago when they speculated. Emboldened by success B. E. Pegram plunged deeper, but while holding 300,000 bushels recently the price dropped and he dropped \$36,000. A big wheat deal on the Chicago Board of Trade also resulted disastrously and the firm had to sell out to save them-

selves. Creditors get nothing. Local banks are secured, farmers are promised an early settlement, but Chicago commission men who are heavy creditors are left out in the cold. Liabilities \$150,000; assets very insignificant.

J. M. Vanderhoof of Darien, Wis., has completed his new elevator and started the machinery, which is driven by a Lewis Improved Gas and Vapor Engine, made by the Webster Manufacturing Company of Chicago. He has three elevator legs and will build another. Included in the machinery outfit is a dustless elevator separator and a scouring machine. With his 16-horse power gas engine he handles 5,000 bushels a day, and can store 20,000. With the dump scales he can empty and weigh a wagon load in less than three minutes.

LATE PATENTS

Issued on September 27, 1892.

CONVEYOR.—Theodore L. Marvel, Taunton, Mass., assignor to Wm. H. Phillips, same place. (No model.) No. 483,232. Serial No. 286,219. Filed March 23, 1888.

EXTENSION FEED FOR CORN SHELLERS.—William H. Rush, Elmwood, Neb. (No model.) No. 483,239. Serial No. 421,045. Filed Feb. 10, 1892.

OSCILLATING GRAIN METER.—Henry H. Boenker, St. Charles, Mo. (No model.) No. 483,417. Serial No. 421,010. Filed Feb. 10, 1892.

CONTINUOUS TROUGH CONVEYOR.—James Pollock, Wilkes-Barre, Pa. (No model.) No. 483,475. Serial No. 439,634. Filed July 11, 1892.

Issued on October 4, 1892.

GRAIN ELEVATOR.—Apostolos Marangos, Marseilles, France. (No model.) No. 483,566. Serial No. 429,227. Filed April 14, 1892. Patented in France Feb. 20, 1890. No. 203,819; in Belgium Aug. 22, 1890. No. 91,732; in England Aug. 25, 1890. No. 13,349; in Italy Sept. 11, 1890. No. 145; in Spain April 6, 1891. No. 11,772; and in Austria-Hungary Dec. 15, 1891. No. 38,664 and No. 63,358.

GRAIN CARRIER.—William H. Knapp, Kalamazoo, Mich. (No model.) No. 483,617. Serial No. 427,038. Filed March 30, 1892.

AUTOMATIC WEIGHING APPARATUS.—Michael E. Reiser, Hennepin-on-the-Sieg, Germany. (No model.) No. 483,636. Serial No. 419,945. Filed Feb. 1, 1892.

METHOD OF POLISHING RICE OR OTHER GRAINS.—George B. Prochaska, New Orleans, La. (No specimens.) No. 483,868. Serial No. 394,028. Filed May 25, 1892.

MACHINE FOR HULLING RICE.—Edward L. Cantwell, Calcutta, India. (No model.) No. 483,890. Serial No. 420,444. Filed Feb. 25, 1892.

GRAIN WEIGHING MACHINE.—August H. W. Droste and Henry H. Bruns, St. Charles, Mo. (No model.) No. 483,909. Serial No. 428,869. Filed April 12, 1892.

Issued on October 11, 1892.

MEANS FOR TRANSMITTING POWER TO GRAIN ELEVATORS.—Dighton A. Robinson, Minneapolis, Minn. (No model.) No. 484,048. Serial No. 397,625. Filed June 26, 1891.

GAS ENGINE.—John Wehrschmidt, Cleveland, O. (No model.) No. 484,168. Serial No. 416,666. Filed Dec. 31, 1891.

Issued on October 18, 1892.

CORN SHELLER.—Samuel Stroud, Elmwood, Neb. (No model.) No. 484,474. Serial No. 426,514. Filed March 26, 1892.

HAY PRESS.—James A. Mealer, Lampasas, Texas. (No model.) No. 484,204. Serial No. 424,189. Filed March 8, 1892.

HORSE POWER.—William B. Swartz, Buckeye City, Ohio. (No model.) No. 484,524. Serial No. 435,295. Filed June 2, 1892.

ROTATING GRAIN METER.—George E. Wilson, Stillwater, Minn., assignor to the Minn. sota Thresher Manufacturing Company, same place. (No model.) No. 484,691. Serial No. 429,852. Filed April 20, 1892.

HAY PRESS.—John T. Russell and Jefferson D. Williams, Rogers, Ark. (No model.) No. 484,757. Serial No. 421,422. Filed Feb. 13, 1892.

Issued on October 25, 1892.

FEEDER FOR BALING PRESSES.—John H. Kruse and Milton K. Shipley, Oswego, Ore. (No model.) No. 485,045. Serial No. 420,108. Filed Feb. 2, 1892.

BALING PRESS.—Charles E. Whitman, St. Louis, Mo. (No model.) No. 485,072. Serial No. 430,258. Filed April 22, 1892.

Cheap corn this fall has induced distillers to start up idle distilleries and build new plants.

ITEMS FROM ABROAD

In September Sweden imported 38,000 qrs. wheat and 8,000 sacks flour.

During September Spain imported 69,000 qrs. wheat and 5,000 sacks flour.

In September Holland imported 280,000 qrs. wheat and 76,000 sacks flour. The exports included 147,000 qrs. wheat and 5,000 sacks flour.

Italy's crops are above the average except barley which is slightly below. Wheat yielded 45,000,000 hectolitres, against an average of 42,000,000.

Heavy rains succeeded by fine weather have greatly benefited the crops in India. These favorable conditions prevail over nearly the whole country.

In September Germany imported 221,000 quarters of wheat and 16,000 240-pound sacks of flour. The exports for the month included 99,000 sacks of flour.

Stocks of wheat at Liverpool on November 1 were 617,311 quarters of 480 pounds, against 280,000 quarters a year ago. On October 1 the stocks aggregated 614,304 quarters.

The prospects for the next wheat and rye crops in Southern Russia are good. The seed lately planted is doing well owing to the heavy rains that fell after the two months' drouth.

Crops in South Australia that had been despaired of on account of drouth have been saved by the recent heavy rains, and with a continuance of good weather a good yield is looked for.

During September Belgium imported 414,000 qrs. wheat and 47,000 sacks flour and meal. In the same period the exports comprised 56,000 qrs. wheat and 58,000 sacks flour and meal.

In France foreign wheat is dearer than the home grown and consequently sells slowly, except in the Mediterranean ports. Farmers want fine weather to bring the wheat plant out after the heavy rains.

France's crop of oats is officially estimated at 243,000,000 bushels, against 302,000,000 (official) last year; and the barley crop this year is estimated at 50,000,000 bushels, against 75,000,000 last year.

Australia and New Zealand have exported during the period from January 1 to October 22, 607,000 quarters of wheat and flour combined, against 1,219,000 quarters during the corresponding period of 1891.

The Argentine Republic has imposed a tax on grain growing in the province of Santa Fe. The tax will tend to diminish the acreage or at least prevent the extension of the area devoted to grain, and thus limit exports.

Supplies present and prospective are large beyond the "dreams of avarice," but the current demand and the future wants of Western Europe are also far in excess of what was thought necessary earlier in the season.—*Corn Trade News, Liverpool.*

Crops in England have fared badly this year; indeed everywhere the harvest has been a disappointment, and in Lincolnshire and Yorkshire a quantity of grain is still ungathered which it is feared will be ruined by fall storms before it can be harvested. Autumn plowing and sowing has been checked.

Hungary exported in September 242,000 qrs. wheat, 388,000 sacks flour, 63,000 qrs. corn, 166,000 qrs. oats, 106,000 qrs. rye, 265,000 qrs. barley, and 37,000 qrs. beans, against 348,000 qrs. wheat, 316,000 sacks flour, 47,000 qrs. corn, 126,000 qrs. oats, 137,000 qrs. rye, 289,000 qrs. barley and 83,000 qrs. beans in September, 1891.

India's wheat crop is 203,168,000 bushels, against 255,434,667 bushels last year. The acreage devoted to wheat was 24,088,000 against 26,576,000, the average being 26,544,000 acres. The large crop of 1891 and the extraordinary demand from Europe caused an unprecedented exportation. In view of these facts it is believed that exports from India will show a decrease on the crop of 1892. Since April 1, 1892, 24,640,000 bushels of wheat have been exported, against 38,140,000 bushels in the corresponding period of 1891.

Sir John B. Lawes, who has been growing wheat on his farm in England for forty-nine years, taking his own crop as a basis, estimates the country's harvest at 59,387,846 bushels of wheat, and to meet the home consumption of 230,000,000 bushels 175,000,000 will have to be imported. But as his crops were better than those harvested in other parts of the country the requirements of foreign wheat may safely be placed at 184,000,000 bushels, and about 24,000,000 bushels of this supply is now on hand in England, leaving 160,000,000 bushels to be imported.

The crop in Austria is estimated at 6,060,000 quarters of wheat, 2,240,000 of corn, 13,600,000 of oats, 9,000,000 of rye and 7,000,000 of barley, against 5,000,000 of wheat, 2,325,000 of corn, 13,300,000 of oats, 8,483,000 of rye and 6,620,000 of barley last year. The quality of the grain is better this year than last; but in Hungary dry weather has injured the crops, especially the wheat and corn.

Hungary harvested 16,700,000 quarters of wheat, 7,200,000 of oats, 6,500,000 of rye, and 6,320,000 of barley, against 16,900,000 of wheat, 18,000,000 of corn, 8,250,000 of oats, 5,300,000 of rye and 6,650,000 of barley.

Russia's grain trade is in a sad state. Several St. Petersburg firms have failed and exporting houses at Taganrog, Berbiensk and Mariopol have suspended. The enormous stocks of grain on hand at export points have fallen in price and owing to the few cargoes offered ships have ceased running and freight rates to Western Europe have risen.

Russia has harvested, according to the latest official estimate, of wheat 31,000,000 quarters, corn 2,800,000, oats 62,000,000, rye 84,000,000, and barley 18,000,000, against 20,600,000 quarters of wheat, 3,000,000 of corn, 52,000,000 of oats, 60,000,000 of rye, and 17,000,000 of barley last year. All crops this year were above the average, although below those of 1887 and 1888.

Algeria exported in August 23,000 quarters of wheat, 33,000 of oats, 8,000 of barley and 1,800 sacks of flour, against 46,000 of wheat, 49,000 of oats, 53,000 of barley and 900 sacks of flour in the preceding August. The imports in August were 500 quarters of wheat, 500 of barley, no oats and 9,000 sacks of flour, against 500 of wheat, 1,500 of barley, no oats and 4,000 sacks of flour in August, 1891.

THE EXCHANGES

Memberships in the Chicago Board of Trade have been selling at \$1,025.

The West Superior Board of Trade is getting quotations by wire direct from Chicago.

The Winnipeg Grain Exchange has moved into the new Board of Trade block erected by N. Bawlf, the grain dealer.

Tickets of membership in the New York Produce Exchange have declined from \$675 to \$625, and are renting at \$25 a year.

Messrs. Edward Partridge, William McHenry and Charles Barrett were recently hauled over the coals by the Chicago Board of Trade for violating the rules relating to trades in puts and calls.

The four sample tables recently placed in the Duluth Board of Trade were auctioned off by Secretary Welles for a premium of \$117.50. Among the highest bidders were those who at first had objected to the introduction of the tables.

The grain section of the Toronto Board of Trade has appointed the following committee to look after grain inspection on the frontier: G. A. Chapman, W. D. Mathews, L. A. Tilley, C. H. McLaughlin and H. N. Baird, chairman.

The Boston Chamber of Commerce recently elected Edward Kemble, president; John P. Hilton, vice-president; Elwin G. Preston, secretary; F. N. Cheney, treasurer; and B. Hinckley, O. E. Sands, C. Austin and H. O. Underwood, directors.

The Chicago Board of Trade will be represented at the meeting of the National Board of Trade at Washington, D. C., next January, by Geo. F. Stone, Geo. M. How, W. T. Baker, J. T. Rawleigh, W. S. Seaverns, F. G. Logan, W. J. Pope, H. F. Dousman, T. A. Wright and G. Montague.

The Montreal Corn Exchange was alarmed at the prospect that all Canadian grain billed for Europe via New York would be inspected by the New York Produce Exchange and instructed its representatives at the meeting of railroad men and representatives of other exchanges in New York to strongly oppose such a course, believing that it would be a great injury to the grain trade of Canada. However it was decided the Manitoba grain should be graded at Winnipeg and other grain at the frontier, thirteen bins being set apart in New York elevators for these shipments.

In reply to the request of the Kansas City Board of Trade that American cereals and packing house products be admitted free of duty into Mexico, Senor Romero, secretary of foreign affairs of that country, says that the production of cereals in Mexico has been, under normal conditions, sufficient to satisfy the needs of the consuming public; but that this year, due to drouth, a part of the crops were lost, and the government therefore decided to permit the duty free introduction of some cereals for a period of time sufficient to all the farmers to raise their new crops, and that the executive will not grant those privileges unless in special cases like the one cited. The same may be said of packing house products.

Broom corn valued at \$5,158 was exported in September, against \$11,188 worth the preceding September; and during the nine months ending with September \$79,554 worth was exported; compared with \$134,717 worth during the corresponding period of 1891.

Fires, Casualties, Etc.

An old grain elevator at Marseilles, Ill., was burned October 21.

A distillery at Cincinnati, O., was burned October 8. Loss \$12,000.

W. H. Covey, grain dealer at Elba, Neb., suffered loss by fire recently.

Harbeck's empty grain warehouse at Brooklyn, N. Y., was burned November 12.

A. N. Hipwell, grain dealer and storekeeper at Beeton, Ont., suffered loss by fire recently.

William Motes, engineer in C. W. Pringle's elevator at Lilly Chapel, Ohio, broke his arm recently.

Booth, Edwards & Co., dealers in grain, hay and feed at Bartow, Fla., suffered a loss of \$3,000 by fire recently.

Two warehouses at Greer Bay, Wis., owned by Straubel & Liesse, were recently burned. Loss \$1,000; no insurance.

The "Northwestern Elevator" at Glasston, N. D., was burned on the ground on November 1, with 50,000 bushels of wheat.

John K. Speed & Co., grain dealers at Memphis, Tenn., suffered a loss by the burning of their warehouse recently. Insured.

R. A. Boling's grain elevator at Plymouth, O., was burned on the night of October 20. Loss \$6,500; partially insured.

D. W. Chandler's warehouse and feed mill and stock of lumber at Oxford, Pa., were burned October 25. Loss \$20,000; partly insured.

James Seddon's Sons, dealers in grain and feed at Philadelphia, Pa., suffered a loss of \$4,000 by fire recently. Insurance \$2,000.

The elevator of the St. Paul & Kansas City Grain Company at Cambridge, Ia., was burned with its contents October 11. Loss \$18,000.

Henry Heile & Sons, dealers in grain and hay at Cincinnati, O., and Covington, Ky., suffered loss recently by the burning of their establishment at Covington.

Two grain trimmers were seriously injured by the falling of a spout at the "Illinois Central Elevator B" in Chicago November 11. One man had his leg broken.

The corncob pipe factory of the Ruth Pipe Company at St. Louis, Mo., came near going up in smoke recently. The fire was put out after considerable damage had been done.

The "Wabash Elevator" at Chicago was damaged to the extent of \$500 on November 11 by a fire that started in the roof of the boiler house while the men were at dinner.

The "Security Elevator" at Minneapolis, Minn., narrowly escaped destruction October 11 by a fire in the boiler room. The furnace "kicked" and set fire to a pile of shavings. Loss \$100.

The elevator of Coey Bros. & Co. at Rockford, Wash., collapsed October 21 under an immense load of wheat. The mingled grain and timbers covered the ground several feet deep. Loss \$2,000.

The grain warehouse of the Eagle Milling Company at Tucson, Ariz., was burned recently. Loss on building and grain \$15,000; on hay owned by L. Zeckendorf & Co. \$5,000; both partially insured.

A. C. Barrett, agent in charge of the house at Newman, Minn., for the Minnesota & Northwestern Elevator Company, committed suicide recently by shooting himself in the head with a revolver. He was despondent and in ill health.

A grain warehouse and flour mill at Dixie, Ore., were burned November 2, with 80,000 bushels of wheat. The buildings and machinery were valued at \$30,000; insurance \$15,000. Farmers owned the wheat and nearly all carried insurance.

The elevator at Albion, Neb., operated by J. D. Brewer and owned by Miles Dodd, Jr., of Los Angeles, Cal., was destroyed by an incendiary fire October 17, with \$2,500 worth of grain, insured for \$1,000. The building was insured for \$3,000.

An old grain elevator at South Chicago, Ill., owned by the Baltimore & Ohio Railroad Company, was burned October 19 with several thousand bushels of wheat. Loss \$6,000; insured. The house was 20x75 feet and 50 feet high, and was built many years ago.

The Hansen Grain & Malt Company's elevator and malt house at Milwaukee, Wis., were destroyed in the great fire of October 27. After smoking from the upper windows the elevator burst into flames from top to bottom, and the burning grain poured into the streets. The

heat from the malt house was intense. Jets of bright green flame flared from its windows and eaves before the entire building was ablaze. Loss \$600,000; partially insured.

The grain elevator of Arnott & Streeter at Jeddo, Mich., was burned on the night of October 21. Loss \$40,000; no insurance. A spark from some passing locomotive is thought to have started the fire.

J. M. Love's grain house at Newton, Ill., was burned at 3 o'clock on the morning of October 30, with a quantity of corn, wheat, oats and timothy seed. Loss \$2,500; insurance \$1,700. The fire is supposed to have been caused by a passing locomotive.

George R. Scott & Co.'s grain elevator at Beatrice, Neb., was badly damaged by fire November 13. Its contents, 20,000 bushels of wheat, were ruined by water. Loss on building and machinery, \$2,500; insurance, \$3,000. Loss on grain, \$8,000; insurance, \$7,000.

M. Titus, of W. H. Ferguson & Co., grain dealers at Hastings, Neb., was killed by a switch engine November 1. He stepped from the main line to let a train pass and the switch engine on the siding ran him down, cutting his body in two at the hips and horribly mangling it otherwise.

Edward Oliver was instantly killed in his grain elevator at Wetzel, Ill., at 10 o'clock October 24. A choke stopped the flow of grain and he went to the top floor to adjust the machinery. His clothing caught on a belt, drawing him to a fast running shaft, around which he was whirled and horribly mangled.

Scott Darter's elevator at Crawfordsville, Ind., was burned on the night of November 4, with several freight cars standing on the switch. Loss on the building \$3,000; insurance \$2,000. Besides 3,000 bushels of wheat, a quantity of oats, several hundred bushels of corn and a carload of flour were burned. Insurance on grain \$2,500.

The grain elevator of Perry R. Fulley at Plainfield, Ind., was destroyed by an incendiary fire at midnight November 2, with 5,000 bushels of wheat. Loss \$8,000; little insurance. An attempt had been made to burn the elevator a week before, when coal oil was found to have been poured on it, and an empty can was lying near. The firing of the building is believed to have been done by friends of a man named Williams, who was killed recently by another named Allison. They believed that Allison had taken refuge in the building, but he had left town and their attempt to revenge Williams' death only resulted in a great loss to an innocent third party.

INCREASED ELEVATOR CAPACITY FOR NEW ORLEANS.

For some time past a scheme has been in projection for a joint inspection of the new grain elevators at Westwego and Southport, to be participated in by the various railroad officials, grain brokers, ship agents, insurance men and others interested in the development of the New Orleans grain trade. Accordingly the secretary of the Commercial Club issued invitations to quite a number of well-known business men for the purpose of making such an inspection.

The trip up the river afforded an excellent view of the shipping of the port. Westwego, six miles above Canal street on the right bank, was reached after a short run and the party disembarked to visit the new elevator which has just been leased by Hall & Robinson of Kansas City. This elevator was built by the Texas & Pacific Railroad Company. It shows that this company is reaching out for a branch of trade that they have never before catered to. Work is actively progressing on the switches from the main track about a half mile in the rear. Piling is also being driven for a long wharf, which will enable several steamers to lie at the elevators at once. The elevator has a capacity of about 350,000 bushels and is built on the most modern plan.

They were met at the landing by Geo. W. Roth, superintendent of the elevator, and W. T. Heim, secretary. Under their escort the party made a thorough inspection. Since the opening a number of improvements have been made. Since September 19, the date when the first shipment of grain was made, a number of new tracks have been laid in the yard, and at present the total length of tracks amounts to four and one-half miles. A new cistern has been built on the roof and with the present arrangements any part of the structure invaded by fire can be flooded at once, thus reducing the fire risk to a minimum.

Superintendent Roth said that orders had been issued for the erection of buildings which will increase the capacity of the elevator 1,000,000 bushels. Work will not be begun, however, until next season. Asked as to the amount of work done since the opening of the elevator, Mr. Roth said that about 1,000 cars had been handled so far. Eight vessels have been loaded from the elevator up to date.

After thoroughly inspecting the Westwego plant the trip was continued up to Southport, where a new elevator of double capacity is being constructed in the rear of the old one, upon which the river is steadily encroaching. When the new elevator is completed the grain capacity of Southport will be 500,000 bushels. Men are at work on this structure day and night. The work of extending the wharf is now going on and will be completed before winter. It will increase the length of the wharf 450 feet.

PRESS COMMENT.

WHEAT CHEAPER THAN OTHER ARTICLES.

Many of the advanced thinkers who have made a study of the currency question are of opinion that the persistent decline is due almost solely to the appreciation in the value of gold, but as was pointed out by a correspondent at Newcastle lately, wheat is not only cheap of itself, selling now at nearly 50 per cent. below its average price for the 11 years, 1867-77, but it is relatively 20 per cent. cheaper than maize, barley, and other articles.—*Corn Trade News, Liverpool.*

HIDING WHEAT.

Certain high-toned moralizers, whose own individual interests are concerned in the question, assert that it is "disgraceful" for the elevator men in the Northwest to refuse to give out their stocks of wheat. These same moralizers assert that, if the elevator men persist in their refusal, "the press will find a way to secure the figures." How? The newspapers certainly cannot force the owners of private property to reveal their private affairs. The only thing they can do is to publish exaggerated figures, and that is exactly what they have been doing for years, even with the figures given out by the holders of wheat.—*Milling World, Buffalo.*

THE LAKES AS RATEMAKERS.

Recent events have shown the dominating influence of the great lakes in making freight rates for at least one-half of the United States. The Great Northern Railway, which operates a steamship line between Duluth and Buffalo in connection with the Reading and Erie railroads, has reduced certain rates to New York and New England 50 per cent., the ostensible excuse for the reduction being, it is alleged, the "irregularities of the 'Soo' lines." As the rail rate east and west has shrunk with the building of many roads, so will this evolution of the lake freight carrier with the extension of its use be likely to revolutionize railway rates. Transportation managers have long recognized the lake traffic as most important, but not until now have they considered it all-important as a public rate regulator.—*Bradstreet's.*

FARMERS TO BLAME.

The farmers are themselves to blame largely for the present depression in prices. They held a considerable portion of last year's crop, and threw this in a mass on the market just previous to the advent of the new crop, thus forcing prices down at the beginning of the crop year. Since the commencement of the crop year they have been doing their best to hold prices down by rushing in their new wheat as fast as they can do it. While actual conditions are very favorable for higher prices, buyers across the Atlantic are restrained from advancing their views, on account of the large marketings of new wheat in America. With such vast quantities of new wheat being marketed on this continent, European buyers are apt to conclude that the crop is much larger than it is reported to be, and consequently they will be cautious.—*Winnipeg Commercial.*

THE TIME TO LOOK FOR HIGHER PRICES.

It is told that farmers have sold so much wheat they have but little left, and the tellers are able to prove it, but the proof as well as the teller is regarded by the public with suspicion, while the facts stand that there were never before at this time in the year so many bushels of wheat in sight, and that there never before was a time when the volume coming forward to supplement it was so large. It really makes little difference to the public whether the farmers are selling less than they were, or elevator men are keeping up the supply by "shipping out." The grain comes from an obscure invisible to a clear and legible visible, and while such conditions remain, explanations of it, or apologies for it, will hardly create important reactions. When receipts fall off, or are exceeded by exports and consumption, then with a decreasing visible will be the time to look for better things in the line of higher prices.—*Market Record.*

WIDER INTELLIGENCE REQUIRED.

An event growing out of this sentiment of commiseration for the farmer by the elevator men is humorous in its imbecility, or stupidity, or both, in the refusal of several of the elevator men to give their receipts and shipments to *Bradstreet's*, on the ground that publicity of our enormous visible supply is simply a public invitation for Europe to offer us any price. If Europe could be held in ignorance of the condition of supplies at the end of harvest, she might buy large stores under the effect of the uncertainty, and under such stimulus, prices would naturally advance. But the truth would certainly become evident under the pressure of increasing stores, the reaction would carry the price as far in the opposite direction and trade would be suspended in the same proportion. What the farmer requires most of all is a wider intelligence of his conditions, for upon this alone he must depend, if he shall cease to flood an already overloaded market, or to produce so far in advance of the demand.—*Milling.*

Latest Decisions.

Uncovered Cog Wheels.

It has been decided by a Kansas court that a manufacturer is liable for damages for all injuries caused by having cog wheels and bevel wheels uncovered.

Duties of Connecting Lines to Transfer Freight in Bulk.

The matter of transferring freight in the cars of original shipment from one connecting railway line to another, is wholly a matter of contract between the railway companies, and as a matter of law a common carrier cannot be obliged to receive freight from another carrier in foreign cars, unless the delivering road will waive on its own cars, and pay on cars of other roads the mileage fee charged for the use of the cars. In other words, a railway company cannot be compelled to hire the rolling stock of other roads, when it has cars of its own which can be used without cost.—*Oregon Short Line vs. Northern Pac. Ry. U. S. Circuit Court, Oregon. 51 Fed. Rep. 465.*

Liability for Error of Incompetent Employee.

The supreme court of Pennsylvania has decided that where an employee was supplied with an incompetent helper, and complained to his foreman, and was assured by them that another helper would be employed as soon as a suitable one could be obtained, and he was thereafter injured through the incompetency of his helper, he cannot be charged with contributory negligence for having continued to work with such incompetent help. Where the foreman had power to hire men and to discharge them, and to a certain point had authority as to their compensation, he had sufficient control of the business to render notice to him of the incompetency of the helper a notice to the employer.

Carrier—Limiting Liability—Negligence.

The supreme court of Indiana held, in the recent case of the Terra Haute & Logansport Railroad Company vs. Sherwood et al., that where articles carried by a common carrier under a special contract limiting liability for failure to carry safely and injury from certain specified perils are not live stock and there is no agreement that the owner's agent shall have charge of the property in transit, the burden is upon the carrier to show that the injury or loss to the shipper was attributable to one of the perils contracted against, but that where the property carried is live stock and the owner undertakes to go with it and care for it, in an action to recover for a breach of the contract of carriage he must allege and prove that the injury or loss was not attributable to his failure to perform or the negligent and improper performance of acts which he had undertaken.

Insurance—"Shifting Risk."

The appellate court of Indiana held, in the recent case of the Farmers' Mutual Insurance Association vs. Kryder that insurance of a farmer's "barn and contents therein" against damage by fire and lightning belonged to the class known as "shifting risks," that the policy covered stock, machinery, grain, etc., not in the barn at the time the policy was taken, but afterward placed there to replace or renew such contents as were there at that time; that horses usually in the barn destroyed by lightning at a little distance therefrom were not covered by the indemnity; that liability could accrue under the policy within the meaning of the term "contents therein" only for such property as was actually in the barn when damaged or destroyed, and that the insured, who had read the policy, could not rely upon representations of the agent that the policy would cover the horses whether in or out of the barn, such representations being not of any material matter of fact, but of a question of law.

Connecting Roads—Joint Tariff—New Line.

A decision of much importance was rendered by the United States Circuit Court of Appeals at St. Paul, Minn., recently, Justice Brewer of the United States Supreme Court writing the opinion. The case was one in which a shipper of Scranton, Iowa, sued for the recovery of alleged overcharges on corn shipped to Chicago. He began shipping east to Chicago, but finding that the through rate to New York was cheaper he shipped through subsequently, and sued for the difference in rates. He recovered a judgment which has been reversed by the circuit court of appeals. Judge Brewer, in rendering the decision of the latter court, holds that, where two companies owning connecting lines of roads unite in a joint through tariff, they form for the connecting roads practically a new and independent line; that neither company is bound to adjust its own local rates to suit the other; nor compelled to use a joint tariff with it, but that it may insist upon changing its local rates for all transportation over its lines, and that if the companies make a joint tariff it is not a basis by which the reasonableness of the local tariff of either line is determined. "In the 'long and short haul' provision of the law," Judge Brewer says, "the use of the word 'line' is significant. Two carriers may use the same road, but each has its separate line. The defendant may lease trackage rights of any other railroad company, but the

joint use of same track does not create the same line so as to compel either company to graduate its tariff by that of the other. In this act joint tariffs are recognized and, if Congress had intended to make the local tariff subordinate to or measured by the joint tariff, its language would have been clear and specific."

Bill of Lading—Title—Advances.

In the case of Harrison et al. vs. Mora et al., reported in the supplement to the Philadelphia *Legal Intelligencer*, the Supreme Court of Pennsylvania held that the delivery of a bill of lading to the order of a factor vests the title of the goods in the factor, as between the vendor and third persons; that the title of the holder of a bill of lading who has a lien for advances is not affected by an attachment issued at the suit of the shipper's creditors; that a factor may have a lien for past advances on goods shipped to the factor with directions to deliver to a third party on payment of the price to the factor, and that there is nothing in such circumstances inconsistent with a lien on the goods or indicating an intention to limit the lien to the price. In the case before the court it appears that by a uniform mode of dealing a factor made advances to defendants on general account to be protected by subsequent consignments. Defendants, through the factors, contracted to deliver a certain quantity of goods to plaintiffs. After some of the goods had been delivered through the factors a dispute arose as to the quantity necessary to complete the contract. Defendants shipped a cargo billed to the factor's order, with directions to sell part and deliver the balance, to plaintiffs in fulfillment of the contract, if plaintiffs accepted a draft from the factor for this and previous deliveries. Plaintiffs refused to accept, and seized the goods and balance in their hands on foreign attachment for damages for failure to comply with the contract. The court held that when acceptance of the goods was refused they did not become the property of defendants so that they could be attached as belonging to them, in the absence of evidence that such was the intention, and in view of the bill of lading which transferred title to the factors, and that, in view of the mode of dealing of the parties, and in the absence of evidence of a new contract between them, the factors had a lien on the balance in plaintiffs' hands for advances.

OBITUARY

Samuel Stearn, dealer in grain and hay at Spokane, Wash., is dead.

John T. House, of the Union Hay Company of Kansas City, Mo., is dead.

Frederick L. Mannes, dealer in grain, flour and feed at Philadelphia, Pa., is dead.

H. B. Taliaferro, of H. B. Taliaferro & Co., commission grain dealers at New York, N. Y., is dead.

John B. Large, of Gill & Fisher, grain dealers of Baltimore, Md., and a well-known member of the Philadelphia Commercial Exchange, died November 1, in Philadelphia, Pa., after several weeks' illness. He was very popular with personal friends and business acquaintances.

MINNESOTA GRAIN INSPECTION.

The claim is often made that the same wheat will inspect higher grade in Duluth than in Minneapolis. Shippers to the East have sometimes noted the inferiority of Duluth grain, compared with Minneapolis shipments. It is the talk this season as it was last. A few weeks ago a large cargo shipped from Duluth was refused in New York for not being up to grade, and has thrown suspicion upon the Duluth inspection that it may be hard to remove. "This means a black eye for the Minnesota inspection department if it proves that the New York house is correct. They sent samples back to Duluth which are not very nice in general appearance. But as customary, the shippers retained samples and the inspection department also had samples. At a special meeting of the directors the Board of Trade called Monday to consider the matter, these were placed beside the sample sent back from New York and compared under a glass. The New York sample did not compare with the samples retained. The wheat was dull and dirty looking, having much the appearance of smutty grain. Both Duluth samples were good, full weight specimens of No. 1 Northern Wheat. The general verdict of the meeting was that the samples sent back from New York must have been taken from cars that had been used in hauling coal, and not properly cleaned before the wheat was placed in them at Buffalo. The whole affair was referred to the committee on inspection to investigate thoroughly and report to the board. The committee was also authorized to consider any similar cases that may come up."—*Market Record, Minneapolis.*

Out of 49 elevator fires occurring in the eight years preceding 1892 22 were known to have been caused by locomotive sparks, 15 by machinery, and 12 by spontaneous combustion. Out of several hundred elevator fires occurring in those eight years many were known to have been caused by exposure and incendiarism.

PERSONAL

E. H. Kegley has moved from Santa Anna, Tex., to Quincy, Ill.

W. H. Duncan has taken charge of the elevator at Austin, Minn.

O. Taylor, the grain buyer of New Hampton, has moved with his family to Ionia, Ia.

Mr. Sands has disposed of his interest in the elevators at Tomah, Wis., to J. H. Acker, and moved to Viroqua.

J. D. Wicks, of Carleton, Neb., will fill the place of A. M. Dyer, as manager of the Carleton Grain Company.

David L. Lyon has moved with his family from Nassau to Clarion, Ia., where he has bought and is operating a grain elevator.

H. A. Sowle, the elevator man of Minneapolis, Minn., was married October 19 to Miss Gertrude M. Morse of St. Louis, Mo.

John O'Gordon has taken a position as buyer for the Great Northern Elevator Company at Jones' Elevator in Belview, Minn.

Louis G. Groff, Jr., of L. G. Groff & Son, grain dealers of Philadelphia, Pa., was married November 2, to Miss Nellie M. Horner.

Robert Irvine, the popular grain dealer of Apple River, Ill., on October 19 gave away his daughter Jennie in marriage to Earle M. Maynard.

Edward Mezger has moved from Bloomington to Chicago, Ill., to accept a position with Lasier, Timberlake & Co., whose grain business is increasing every month.

A. A. Cross has resigned the superintendency of the "Great Northern Elevators" at Duluth, Minn., but will continue in charge of affairs until after the close of navigation.

EXPORTS OF WHEAT.

In September we exported 7,177,005 bushels of wheat to the United Kingdom, 20,379 to Germany, 383,816 to France, 2,400,730 to other countries in Europe, 871,349 to British North America, 4,003 to the Central American States and British Honduras, and 4,184 to Asia and Oceania, a total of 10,863,142; against 5,509,141 to the United Kingdom, 935,607 to Germany, 8,173,004 to France, 4,512,859 to other countries in Europe, 1,231,350 to British North America, 6,891 to the Central American States and British Honduras, and 4,999 to Asia and Oceania, a total of 20,374,778 bushels in the preceding September.

During the nine months ending with September we exported 48,403,772 bushels of wheat, valued at \$44,599,802, to the United Kingdom; 5,605,125 bushels, valued at \$5,320,736, to Germany; 11,867,886 bushels, valued at \$11,909,688, to France; 21,375,223 bushels, valued at \$20,402,640, to other countries in Europe; 4,003,238 bushels, valued at \$3,306,159, to British North America; 63,513 bushels, valued at \$65,069, to the Central American States and British Honduras; 5,822 bushels, valued at \$5,817, to the West Indies and Bermuda; 51,551 bushels, valued at \$53,847, to Brazil; 5,897 bushels, valued at \$6,370, to other countries in South America; 13,476 bushels, valued at \$12,538, to Asia and Oceania, and 70,609 bushels, valued at \$73,265, to other countries; a total of 91,466,112 bushels of wheat, valued at \$85,755,931; in comparison with 27,876,295 bushels, valued at \$27,862,195, to the United Kingdom; 3,294,189 bushels, valued at \$3,556,341, to Germany; 31,942,018 bushels, valued at \$32,045,765, to France; 16,250,318 bushels, valued at \$17,191,104, to other countries in Europe; 3,803,137 bushels, valued at \$3,797,489, to British North America; 42,301 bushels, valued at \$47,500, to the Central American States and British Honduras; 161,172 bushels, valued at \$135,632, to the West Indies and Bermuda; 217,352 bushels, valued at \$196,131, to Brazil; 175,022 bushels, valued at \$167,827, to other countries in South America; 25,775 bushels, valued at \$25,332, to Asia and Oceania, and 23,517 bushels, valued at \$28,142, to other countries; a total of 83,812,096 bushels, valued at \$85,053,458, during the corresponding nine months of 1891, as reported by S. G. Brock, chief of bureau of statistics.

OUR CARD BASKET

We have received calls from the following gentlemen prominently connected with the grain and elevator interests, during the month:

A. K. Marselus, Sandwich, Ill.

M. F. Seely, of Seely, Son & Co., Fremont, Neb.

John O. Foerling, Chief Grain Inspector, Philadelphia, Pa.

Jas. L. Wheeler, representing S. Howes, Silver Creek, N. Y.

CROP : CONDITIONS.

HAY.—The average yield of hay is 1.17 tons an acre, nearly the same as last year.

ILLINOIS, BLOOMINGTON, McLEAN Co.—The farmers say that there is a great deal of dry rot in the new corn.

PENNSYLVANIA.—The Hessian fly is reported to be injuring wheat to a considerable extent in eastern Pennsylvania.

BUCKWHEAT.—The November report of the Agricultural Department places the average yield of buckwheat at 14.1 bushels per acre. In New York 14.7; Pennsylvania 14.5; Wisconsin 13.5, and 14.5 in Iowa.

MICHIGAN, OTTAWA Co.—Our farmers are putting in all the fall grain possible. They can be seen plowing and sowing all along the roads, and every available space is being occupied with grain. P. HURON.

KENTUCKY.—The rains of ten days ago are bringing wheat up rapidly. The plants are tender and not as forward as last year; there is still a large amount of wheat in farmers' hands and most will be carried until spring.

MISSOURI.—Nearly all the winter wheat in Missouri is up. The stand is irregular on account of dry weather and insects. Reserves in farmers' hands are below last year. Receipts have fallen off to comparatively nothing and they seem inclined to carry their surplus over.

POTATOES.—The estimated yield of potatoes is 62 bushels an acre. It is 82 in Maine, 63 in New York, 60 in Pennsylvania, 62 in Michigan, 70 in Minnesota, 51 in Iowa, and 47 in Kansas. The crop is almost everywhere light, the tubers small as a rule, and rotting considerably in New York and throughout the West.

OHIO.—Good rains have fallen in Ohio and the wheat is showing great benefits from it. The crop now promises to go into winter quarters in excellent condition. With two weeks of good weather late sown wheat will have reached more than an average growth. The effect of the dry weather seems to have passed away.

WISCONSIN.—The old-fashioned white and yellow Yankee flint corn has almost entirely superseded the dented varieties through Wisconsin. This crop is now all cut up and mostly husked from the shock. But little wheat is raised and barley takes the lead as a grain crop to sell. Clover rotation is doing wonders in renovating the lands exhausted by continuous grain raising.

MICHIGAN.—Southern Michigan shows that the winter wheat is all up; stand averages fair to good. The lighter soils showing up the best and the heavy lands a somewhat uneven stand owing to the dry weather. The crop has not been damaged by insects this fall so far to amount to anything. During the last thirty days farmers have marketed freely, but now receipts are light.

INDIANA.—In Northern Indiana the reports show that the stand of wheat is only fair, having been affected more or less by dry weather and insects. The general conditions of the crop are little, if any, better than last year. In Southern Indiana the wheat is now all up and looking well. The damage done by insects is immaterial. The bulk of the reserves on hand to-day will be carried over until next spring.

WHEAT IN ILLINOIS.—In Southern Illinois the rains of last week have been bringing up the winter wheat rapidly, and the snow of the present week will also have a beneficial effect upon it. Still the wheat is not all up. Neither is the stand particularly good. The dry weather and grasshoppers seem to have injured it. The general average condition of the growing wheat crop in Southern and Central Illinois is not as good as last fall by 10 or 15 per cent. Farmers will carry their reserves, which are fully as large as last year, through the winter. Prices are too low to tempt a sale.

SPRING WHEAT.—From reports covering elevators on the line of the Great Northern Railway the spring wheat situation is practically this. Fully 50 per cent. of the 1892 crop has been sold. The farmers do not seem to care to hold wheat this year as they did last, although there is more reason why they should. At least 75 per cent. of the land has been plowed for the coming crop of spring wheat, and the ground is now frozen up. Deliveries have been so free up to date that we do not look for much of an increase during the next sixty days. In Minnesota plowing is practically all done. The ground is now frozen and but a small proportion of the crop has been sown.

MICHIGAN.—The Michigan crop report for November shows the average condition of growing wheat in the state to be 87 per cent. The average condition November 1 for the last seven years has been 90 per cent. The corn crop is reported largely below the average, yielding 46, 52 and 60 bushels of ears per acre in the southern, central and northern counties respectively, and 49 for the state. The area of clover seed is about three-fourths of that of 1891, and the yield is ninety hundredths bushels per acre. The potato crop is estimated at 81 per cent. of a full average crop in the southern, central and northern counties respectively, and 59 per cent. for the state. The total amount of wheat marketed in October was 2,483,965 bushels, and in August 5,441,137 bushels, or 69,150 bushels in excess of the amount for the same period last year. The total number of farms in the state is 143,764, or

2,625 less than was reported in 1891. The average size of the farms reported is 88.41 acres. Nearly 60 per cent. of the correspondents in the southern counties report injury to growing wheat from insects.

KANSAS.—Kansas reports that wheat is not all up yet. The stand is fair where up. The crop is damaged somewhat by insects, but nothing serious. From 55 to 60 per cent. of the crop of 1892 has been sold. The movement would indicate that so far farmers are not inclined to carry over their surplus until spring. The condition as compared with that of a year ago is not as good by at least 10 to 15 per cent.

CORN.—Crop expert Prime says: Grain dealers, not only in Illinois, but in all the surplus corn states of the West, say that the corn is not going to husk out anywhere near according to the government estimate. Nebraska reports that husking is now being pushed all over the state and the crop is in good condition to crib. It seems to be a settled fact that the yield and quality are both below an average. In bushels by weight the crop cannot exceed 70 per cent. of an average. Farmers seem in no hurry to sell, yet the stations at railroads are all getting a little. The old corn seems to be well cleaned up. Large buyers of corn who generally by this time had contracts made up into the hundreds of thousands of bushels of corn for future delivery now report practically none contracted for. There does not seem to be any prospect of early movement of corn from Nebraska. Iowa reports that little progress has been made in gathering corn. It is not dry enough yet to crib, but soon will be. There seems to be a small quantity of old corn yet, but cattle feeders are taking all the old corn they can get hold of for feeding purposes. In Kansas 50 per cent. of the corn is gathered. It varies greatly in yield. Where rains have fallen during the growing season the crop is turning out fully as good as was expected, but on the other hand in drouthy sections the crop is poor. In Missouri farmers have only just begun to gather their corn and it is generally falling below expectations.

ILLINOIS.—Prime has been reporting for the last three weeks that little progress has been made in gathering corn. First on account of the weather and secondly for the reason that politics has been the absorbing question. Corn is not dry enough yet to crib in large quantities. The following statements, covering all the principal points in Central Illinois, may be taken as a conservative view of the general condition of the corn crop: Corn will be a disappointment in yield, quality, and weight. In some areas corn will be as good as last year, but those regions are an exception to the general rule. Then again we find more or less chaffy and soft corn. Ordinarily at this season of the year large quantities of corn are contracted for, but now little, if any, seems to be selling or contracts being made on the basis of thirty cents, all that dealers will pay. Even with favorable weather no considerable movement of corn is looked for before the latter part of December. Careful inquiry reveals the fact that July 1 60 per cent. of the old corn was in farmers' and dealers' hands. Since then the movement has been heavy and it is difficult to tell just what is back. However, the reserves of 1891 are held by farmers who can build new cribs, and they will hold both crops. Conservative station grain dealers say that farmers are holding less reserves in the way of corn and oats the present time than they have for several years. Oats are particularly hard to get hold of. Offerings are light and orders are being sent to Chicago to be filled on account of the inability to procure them at home.

GOVERNMENT CROP REPORT ON WHEAT AND CORN.—The returns received at the Agricultural Department relative to the cereal crop yield of 1892 indicate a fairly satisfactory condition of the supply, especially of corn in the seven surplus states. The average yield of corn in the seven surplus states is as follows: Ohio, 29 bushels; Indiana, 28; Illinois, 25.8; Iowa, 28; Missouri, 28; Kansas, 23.3; Nebraska, 28.7. The crop returns of November to the Department of Agriculture, with those of October, indicate the yield of the year of the principal food products and point approximately to the perfected estimates at the close of the year. The yield of corn averages by November returns 22.4 bushels per acre, and promises an aggregate production of a little more than 1,600,000,000 bushels, while the other great bread grain, wheat, by the returns of last month, pointed to a product based on average investigation nearly perfected not exceeding 500,000,000 bushels, with a possibility of shrinkage in thrashing and a certainty of light weight. In the Northern states of the Atlantic coast the crop ripened well. In the cotton states it was injured somewhat by excessive moisture causing rot and mold, and in some districts it was shortened by drouth. In Ohio the crop is well cured, but chaffy from drying too rapidly. The yield is uneven, ranging from ten to sixty bushels an acre. The Indiana product is in good condition on early planted areas and better than was expected on late planting and in view of the long continued drouth. The local yields are extremely variable. There is much complaint of lightness of ears and looseness in the cob in Illinois, and the same variability in yield and quality elsewhere. It is well dried out and undamaged by drouth. Some was injured by being cut and shocked too early. There is much chaffy corn, and the average weight will be light. Iowa corn has ripened well, heavy frosts being delayed till the last week of October, but late planted is shriveled from the rapid drying of immature ears. A part of the crop is sound and good and a portion very light. The low-lying areas were damaged irretrievably by the excessive moisture of early summer. Wet weather in spring and drouth in summer reduced

the quantity and quality in Missouri. The acreage in Kansas is reduced by the low yield of sod corn, which is of course, included in the aggregate. Low or bottom lands have yielded better than uplands, as the season was too dry for a large part of the breadth. Scorching winds in June injured the crops materially. Nebraska corn, if planted early, ripened thoroughly. Some of the latest planting put in with the lister was plowed up and sown to wheat. Variability of yield makes it difficult to fix a fair average. In low places there was some injury from frosts.

VALUABLE BOOKS FOR GRAIN DEALERS.

The following standard works will be sent, postage paid, on receipt of prices given:

ROBINSON'S TELEGRAPH CIPHER.—The publishers have recently revised this excellent work, and we are now prepared to supply the trade. Cloth binding, \$1.50; leather.....\$2.00

WEIGH BOOKS.—Containing 125 perforated leaves with four weigh tickets and four stubs to each leaf well printed upon good paper. The books are well bound. Copies will be mailed to any address for.....\$1.00

CLARK'S VEST-POCKET GRAIN TABLES.—A very useful and handy little book for grain buyers; to be used in reducing to bushels any quantity of grain or seeds up to 100,000 bushels. Size 2½ by 8½ inches, 16 pages. Leatherette.....75c. Leather.....\$1.00

KINGSLEY'S DIRECTORY is the only complete work containing the name and address of every firm engaged in the following lines of business: Milling, grain, flour and feed, hay and straw, butter and eggs, fruit and produce, malting, brewing, distilling and poultry. Over 500 pages, octavo, substantially bound in cloth. Indispensable to those who wish to reach the lines of business named above. Price.....\$3.50

POUNDS TO BUSHEL.—These tables which show the number of bushels in any quantity from 20,000 to 70,000 pounds were compiled for the Chicago Grain Inspection Department. They are well printed on good paper and conveniently arranged for quickly finding the number of bushels in a carload. Each book contains ten leaves and each leaf is indexed at margin and printed on one side only. Each book is neatly bound in cloth. They will save clerks much labor and prevent errors in reduction. Price for "OATS" \$1.00; "BARLEY" \$1.00; "CORN AND RYE" \$1.00. The set.....\$2.50

GRAIN DEALERS' AND SHIPPERS' GAZETTEER.—A new publication containing the grain inspection rules for the states of Illinois, Wisconsin, Minnesota, Michigan, Ohio and Missouri, and a complete list of the names of grain dealers and shippers on twenty-five railroads which penetrate the principal grain growing territory of the country. The names were collected recently by the aid of the railroad companies, so the names of no retired firms are given, making it reliable and by far the best book of the kind published. It is well bound and contains 370 pages. Price.....\$3.00

DAVIS GRAIN TABLES.—These tables give the value of any number of bushels of produce weighing 60 pounds to the bushel at 25 cents to \$1.25 per bushel, and the value of any produce weighing 32, 48 and 56 pounds to the bushel at 15 cents to \$1.50. The book also contains Davis' Dockage Table which gives the amount to dock any load of wheat up to 600 bushels at 1½ to 5 pounds dockage. The book contains 219 pages of tables, printed on good paper, with large type, and well bound in cloth. The book is a new publication, and the arrangement of the tables is much more convenient than in some of the old publications. Price.....\$1.25

CLARK'S GRAIN TABLES.—This work is published in several different forms, for use in different lines of business. In these tables pounds are reduced to bushels, so that a buyer can quickly determine the correct number of bushels in a load without doing any figuring. Their use effects a saving every day of more than time enough to pay for them. The edition intended principally for reducing team scale weights to bushels contains nine tables, and is bound in paper. Price 50 cents. This will be found invaluable to country buyers. A new edition, intended for shippers and commission merchants, reduces any quantity up to 64,000 pounds to bushels. It contains sixteen tables, and is neatly bound in leatherette. Price.....\$1.50

For any of the above, address

MITCHELL BROS. Co., 184 and 186 Dearborn street, Chicago, Ill.

Corn amounting to 880 bushels, valued at \$588, was imported during the nine months ending with September; compared with 14,814 bushels, valued at \$10,574, during the corresponding months last year. No foreign corn was re-exported during the nine months, against 9,731 bushels, valued at \$7,196, during the nine months ending with September, 1891.

Rye amounting to 110 bushels, valued at \$215, was imported during the nine months ending with September; compared with 71,824 bushels, valued at \$53,879, during the corresponding months of 1891. Of foreign rye 4,175 bushels, valued at \$3,340, was re-exported during the nine months; compared with 16,015 bushels, valued at \$12,811, during the nine months ending with September, 1891.

WATERWAYS

The schooner F. L. Dauforth, bound from Chicago to Midland with 48,000 bushels of corn, ran ashore and is leaking badly.

The highest rate on the Erie Canal for several years was paid recently, being six cents a bushel on grain from Buffalo to New York.

The largest cargo of oats ever loaded into a lake vessel was 180,000 bushels recently shipped from Chicago on the wooden steamer Ferdinand Schlesinger.

The schooner Flying Cloud with 18,000 bushels of oats for Good Harbor ran on the reef at Glen Arbor, Mich., in a storm recently, and is breaking up.

The plans prepared by Gen. Poc for the 20-foot channel connecting the great lakes have been approved by the war department and he has been directed to advertise for bids on the work.

After survey at Buffalo recently the schooner Home was declared free from liability for the 200 bushels of wet wheat in the cargo. The wetting was due to a terrific storm on Lake Erie.

The steamer Spokane, bound to Buffalo with grain, grounded in the Chicago River, October 19, on the wheat that had fallen into the stream from Norton's wrecked elevator a few days before.

The Schuylkill Canal in Pennsylvania will be made ready for boats next year, it is said, by the Reading Railroad Company, to assist in transporting such heavy freights as grain and coal to tide water.

The Maritime Canal Company of Nicaragua has expended over \$6,000,000 in preliminary surveys, dredging, erecting permanent buildings, building and equipping a railroad twelve miles long and excavating one mile of the canal itself.

The record-breaking steel steamer E. C. Pope loaded 120,000 bushels of wheat at Chicago recently. At Buffalo 120,191 bushels of wheat was unloaded in excellent condition. It is not likely that this cargo will be exceeded until next season.

Shipping interests are dissatisfied with the way the improvement of the harbor at Montreal, Que., has been conducted the past year. The cost of the work has greatly increased and some that is unfinished is likely to be destroyed by ice.

That the lake carrying trade is and will continue prosperous is shown by the fact that over 40 steel steamers and barges are now in process of construction for lake vessel owners who certainly ought to know the prospects for their business.

The Chicago Board of Marine Underwriters recently adopted the following rates per \$100 on grain: To Lake Huron, Sarnia and Detroit River, 85 cents; to Georgian Bay and Lake Erie, 90 cents; Lake Ontario and Ogdensburg, \$1; Montreal, \$1.15.

Engineers believe that a ship canal connecting the Delaware and Chesapeake bays would not prove a successful commercial enterprise, though of great value to Baltimore, Md. The canal would save 300 miles of sailing between Baltimore and Philadelphia.

The superintendent of public works has been requested by the New York Chamber of Commerce to delay closing the Erie Canal until the latest possible moment because large quantities of grain are now lying in the Western elevators for lack of transportation facilities.

The first vessel to sail into the port of Chicago from the lower lakes was the schooner Illinois of 100 tons burden. On that memorable 12th of July, 1834, all the male inhabitants of the then village of Chicago assisted in dragging the tight little craft across the bar.

Efforts have been made to get a lower rate on lake shipments of grain from South Chicago than from Chicago. A lower rate would only be just because although the Chicago River is nearer the foot of the lake, yet tow bills are less on the Calumet and it takes less time to load.

A fleet of whaleback steamers will run between Chicago and Buffalo next season carrying heavy package and bulk cargoes. The steamers are now in process of construction at West Superior, Wis., and are to be 265 feet long, 38 feet broad and of a capacity to carry 100,000 bushels of wheat.

On account of a struggle between shippers and steamship companies at New York over a new bill of lading the New York Central Railroad Company for a time refused to carry grain to that city and a blockade was threatened at Buffalo; but lately the railroad resumed and all fear of a blockade has disappeared.

Western railroad officials have called attention to the fact that vessels running between Memphis and New Orleans feel the effect of rail competition. In some cases boat owners have given up the struggle, and in place of the large vessels of the past substituted small ones which work up and down the tributary streams between Memphis and Jackson, bringing lumber and cotton

from the back country districts down to points where they are transferred to freight cars and conveyed to New Orleans.—*Railroad World*.

A wooden sailing ship, the largest ever built in the United States, has recently been launched. The vessel registers 3,400 tons and will require 40 seamen. It is 345 feet long, 49 feet 2 inches deep, and 29 feet 2 inches broad. This large craft has been named the Roanoke. It is a question whether it will prove a profitable enterprise.

Neither Manitoba nor domestic wheat can be carried in Canadian bottoms from Duluth to Port Huron, as it would be in violation of our coasting laws. But if carried in American bottoms it is not subject to tolls. If carried through the canal from Duluth to Sarnia for consumption in or export from Canada via Montreal or any other port, it would be.

In his annual report to the Secretary of the Treasury, Commissioner of Navigation O'Brien expresses the opinion that the adoption of the policy proposed by the house committee on merchant marine and the fisheries for admitting foreign built vessels to both the domestic and foreign trade of the United States would inflict a severe blow upon the shipbuilding and shipowning interests of the country.

A special effort will be made to complete the Canadian Canal at Sault Ste. Marie in time for the opening of navigation in 1894. The inducements offered by the Government to Hugh Ryan, the contractor, were accepted by him October 4, and he will push the work day and night. The lock in the canal will be 900 feet long, 60 feet wide and 21 feet deep, which is sufficient to float vessels larger than any now sailing the great lakes.

Commerce has greatly increased on the Calumet River in South Chicago the past year. Besides Counselman's new elevator another is talked of, to be built probably at the mouth of the river. The Calumet is deeper than the Chicago River and this difference will tend to increase shipments of grain from South Chicago, especially next year, when the government work of deepening the channels connecting Lakes Erie and Huron is commenced.

Chicago grain shippers have organized the Chicago Insurance Company of Illinois to take risks on lake cargoes. Local agents of the old insurance companies have been exacting heavy commissions, and the shippers propose to save these commissions for themselves. The new company is authorized to do a general business and will begin operations at once and by next season will be fully prepared to handle all business that is offered. George Boyden of Chicago and A. D. Thompson of Duluth are prominent stockholders. Harvey D. Goulder of Cleveland is attorney.

The famous Suez Canal saves only 3,600 miles sailing around the Cape of Good Hope, while the Nicaragua Canal when completed will save 10,000 miles, and pass a tonnage of 6,000,000 tons annually, which at \$2 per ton would be a revenue of \$12,000,000. Considering that the canal will cost less than \$100,000,000 to complete in five years, it seems that no time should be lost by the United States Government in appropriating funds for its construction. At present vessels sailing from New York to San Francisco via Cape Horn must travel 15,660 miles, but via Nicaragua Canal only 4,907 miles would have to be traversed.

Miles Burke, president of the Charles Mix County Warehouse and Transportation Company, operating on the Missouri River above Sioux City, Ia., believes that when the new flour mills at that city are completed the river trade will be revived. His reasons are that if their grain is to be shipped to Sioux City and there reloaded on cars, as at present, they will never be able to make a success of boating; but if the mills are built there to consume the grain it will not only not need to be reloaded but the production of wheat along the Missouri in South Dakota will be greatly stimulated and thus add to the business. Mr. Burke says that Charles Mix county alone can furnish Sioux City mills with 500,000 bushels of wheat by boat every year.

The New York Canal Convention held at Buffalo, October 19, was attended by 596 delegates representing over fifty municipal, business and industrial associations, such as boards of trade, exchanges of various kinds, boat owners' associations, canal improvement unions, etc. It was resolved that the legislature of the state of New York be petitioned to make an appropriation at the next session to lengthen the locks and bottom out the channel, and that any further plans and improvements be left to a board of competent engineers, selected by the executive committee of the Canal Improvement Union. This union favors the lengthening of the locks so two boats can pass at once, and the making of two feet more of water by bottoming out one foot and raising the banks one foot.

A sternwheel freight boat propelled by a gasoline engine was recently launched on the Missouri River at Brunswick, Mo. The gasoline engine as a motive power for freight boats is a novelty, but has proved a success on the Ida Blanche. The boat has no chimney or escape pipes, is 78 feet long, 14 feet wide and draws three feet when loaded. A speed of five miles an hour against the current is easily maintained with a heavy load. The pilot has direct control of the machinery by means of levers, and the only duty of the engineer is to supply oil and gasoline as needed. The fuel costs only \$1.75 per day. The engine cost \$1,200. Henry Strutman is cap-

tain and pilot and Edward Kibler engineer. Such a craft ought to compete successfully with the railroads in the grain carrying trade.

When the Sault Ste. Marie Canal tolls were first collected the Canadian Pacific Railway notified all lake carriers that it would pay the tolls on all goods delivered at Port Arthur. The Northern Pacific Railway immediately made a similar proposition. Consequently the burden on Canadian traffic is not so heavy as it seems.

THREE ELEVATORS.

The "Painesville Elevator" was established in September, 1890, at Painesville, O., and has done a thriving business. In December, '91, it was incorporated under the firm name of the Painesville Elevator Company, with a capital stock of \$20,000. They are wholesale and retail dealers in grain, flour, feed, salt, seeds, etc. The buildings of this company are finely located on Liberty street, in the southern part of the city, with the main tracks of the New York, Chicago & St. Louis Railway system passing their doors on the north, which affords the very best facilities for receiving and shipping produce. The main building is 30x50 feet in dimensions and three stories high, with two large warehouses adjoining, and an abundant ground space. They make a specialty and deal largely in shingles, sewer pipe, hollow tile, etc. This elevator, together with the mills, makes the most desirable grain market in this region. This elevator receives vast quantities of grain from the rich farming territories for thirty and forty miles around. Farmers are assured the Cleveland prices for their grain and can purchase feed at wholesale prices. They also manufacture oil cake meal, which contains nothing but the pure ground cake. Another new feature the company has recently introduced is the sale of cottonseed meal, which is in great demand among dairymen. The company has applied the roller mill system to the grinding of feed with results which are much appreciated by their customers. The officers of the company are: P. J. Mighton, president; O. L. Barnes, vice-president; Harley Barnes, secretary and treasurer. All of these gentlemen are residents of Painesville and have been influential in building up her commerce and adding prestige to her name.

One of the most distinguishing landmarks of Allegheny, Pa., is the North Side Grain Elevator of S. McNaught & Son, at the corner of North and Irwin avenues, which rears its head far above the surrounding buildings and is one of the first objects that strikes the eye on entering Allegheny from any direction. S. McNaught & Son are the sole owners of this capacious elevator and they carry on a large business in the buying, storing and selling of grain of all kinds. They are wholesale and retail dealers in grain, hay and flour, and in addition to this transact an important and constantly increasing business in the manufacture of all kinds of chop and mill feed. Their business is not by any means confined within the limits of Allegheny, as the trade of the firm consists largely in shipping to country towns. In this line alone they take in a territory of 100 miles outside of Allegheny, and this trade is constantly being broadened. Already the business of S. McNaught & Son ranks as one of the chief industries of the North Side. Quite a large city trade is also transacted by the firm, not only in Allegheny, but in Pittsburg, which cuts no inconsiderable figure in the aggregate annual sales of the firm. The storage capacity of the "North Side Elevator" is 100,000 bushels. Since coming into the control of S. McNaught & Son, a few years ago, the trade has more than doubled, which fact speaks volumes for the enterprise and business sagacity of the firm and the honorable and upright methods that characterize all their commercial dealings. They have been in the business for over fifteen years, so it can be seen that they do not lack that ripe experience that is so necessary an adjunct to this important branch of trade. They possess the most advantageous connections with the sources of grain supply, and are, therefore, in a position to successfully cater to the active demand that is constantly made upon them.—*Times, Pittsburg, Pa.*

The "West Side Elevator" connected with Jameson, Scheets & Co.'s city mill, was recently overhauled to some extent and electricity introduced as the motive power. The consequent changes and improvements have now been completed, and everything works in the most satisfactory manner. The capacity of this elevator is 110,000 bushels, and at present it contains some 70,000 bushels of choice old wheat, with some thousands of bushels of rye, corn and oats. Perhaps 30,000 bushels of this wheat is being stored for parties in Southern Illinois, Missouri, Nebraska or Dakota, while the bulk belongs to the firm and is drawn upon to the extent of seven to eight hundred bushels daily for the production of flour. Every bushel of grain in the elevator is handled over and changed from one bin to another every month, to clean it and prevent heating. This work is just now in progress, and being accomplished with much greater ease, convenience and effectiveness than ever before. But the capacity of the plant is much too small, and the firm will doubtless be compelled to erect their contemplated new elevator next spring, upon the site of the old Allen warehouse.—*News, Aurora, Ill.*

Grain may yet be moved through pipe lines. Look at the vast quantities of smoking tobacco that have gone that way.

EXPORTS OF CORN.

In September we exported 562,577 bushels of corn to the United Kingdom, 117,634 to Germany, 122,809 to other countries in Europe, 683,794 to British North America, 1,013,879 to Mexico, 75,696 to Cuba, 48,335 to the other West Indies and Bermuda and 27,235 bushels to South America; against 1,780,882 bushels to the United Kingdom, 205,099 to Germany, 452,899 to other countries in Europe, 330,987 to British North America, 13,509 to Mexico, 24,420 to Cuba, 37,247 to the other West Indies and Bermuda and 19,603 to South America, as reported by S. G. Bock, chief of the bureau of statistics.

During the nine months ending with September we exported 28,184,685 bushels of corn, valued at \$14,964,985, to the United Kingdom; 13,102,762 bushels, valued at \$6,863,846, to Germany; 2,001,644 bushels, valued at \$1,039,321, to France; 14,624,568 bushels, valued at \$7,613,532, to other countries in Europe; 3,029,668 bushels, valued at \$1,446,861, to British North America; 2,943,274 bushels, valued at \$1,926,130, to Mexico; 99,181 bushels, valued at \$74,466, to the Central American States and British Honduras; 722,351 bushels, valued at \$422,068, to Cuba; 43,017 bushels, valued at \$25,749, to Puerto Rico; 4,618 bushels, valued at \$1,258, to Santo Domingo; 397,853 bushels, valued at \$250,615, to the other West Indies and Bermuda; 102,067 bushels, valued at \$67,987, to South America, and 18,601 bushels, valued at \$12,498, to other countries; total 65,274,289 bushels, valued at \$34,710,591; in comparison with 9,686,336 bushels, valued at \$6,366,044, exported to the United Kingdom; 1,899,590 bushels, valued at \$1,221,429, to Germany; 78,752 bushels, valued at \$55,969, to France; 3,360,624 bushels, valued at \$2,266,070, to other countries in Europe; 3,057,053 bushels, valued at \$1,955,228, to British North America; 150,398 bushels, valued at \$119,759, to Mexico; 170,982 bushels, valued at \$168,457, to the Central American States and British Honduras; 166,273 bushels, valued at \$122,448, to Cuba; 1,769 bushels, valued at \$1,258, to Puerto Rico; 30 bushels, valued at \$22, to Santo Domingo; 456,667 bushels, valued at \$344,252, to the other West Indies and Bermuda; 323,526 bushels, valued at \$264,919, to South America, and 12,161 bushels, valued at \$10,467, to other countries; total 19,364,161 bushels, valued at \$12,896,322, during the corresponding period of 1891.

The large increase of exports to Europe is due to the short crops and to the efforts of Chas. Murphy, the American corn missionary. For the month our exports to Mexico show a remarkable increase, being over a million, against 13,000 bushels a year ago. This was caused by large purchases by the Mexican Government to allay the famine.

B. & O.'S NEW THROUGH LINE.

PREPARING FOR THE IMMENSE TRAFFIC INCIDENT TO THE WORLD'S FAIR.

The management of the Baltimore & Ohio Railroad is preparing for an immense business in 1893 while the World's Fair is open in Chicago. The terminals at Chicago are capable of accommodating a much heavier traffic than is now being done, and important changes are being arranged for the handling of very heavy freight and passenger business to the West from New York, Philadelphia and Baltimore. New equipment for largely increased passenger business and an extensive stock of freight cars have been ordered. The various roads of the system will be improved by straightened lines, reduced grades, extra side tracks, and interlocking switches. The new line between Chicago Junction and Akron has shortened the distance between Chicago and tidewater twenty-five miles, and between Pittsburg and Chicago fifty-eight miles.

The distance between Chicago and Pittsburg and Chicago and Cleveland by the construction of the Akron line and the acquisition of the Pittsburg & Western line and the Valley Railroad of Ohio is about the same as via the Lake Shore from Cleveland to Chicago, and by the Pennsylvania from Pittsburg to Chicago. The alignment is to be changed and grades reduced to a maximum of twenty six feet. It is expected that within twelve months the old Baltimore & Ohio through line between Chicago and the Atlantic Ocean will have passed away and the new line via Pittsburg be established, with no greater grades or curvature than on any of the trunk lines.

Work has already begun east of Pittsburg to meet improvements making west of Pittsburg. These improvements will consist of additional second and third tracks, a general correction of the alignment, and completion of the double track on the Metropolitan Branch. It is expected that the new through line will be ready simultaneously with the completion of the Belt Line through the city of Baltimore, which is intended to unite the Washington branch with the Philadelphia division and do away with the present line via Locust Point. Forty new and powerful locomotive engines were added to the equipment during the last two months, and others are in process of construction. The permanent improvements now under way and in contemplation involve the expenditure of some \$5,000,000.—*Baltimore American*.

Timothy seed amounting to 305,004 pounds was exported in September, against 403,381 pounds in the preceding September; and in the nine months ending with September 7,331,449 pounds, valued at \$250,254, was exported; compared with 5,492,982 pounds, valued at \$204,767, in the corresponding months of 1891.

MANITOBA GRAIN STANDARDS.

The official grain examiners have announced that they have fixed the standards for the following grades of Manitoba grain:

Nos. 1 Hard, 2 Hard, 3 Hard, 2 Northern, 1 Frozen, 2 Frozen. The number of grades for which standards have been selected, it will be seen, is very much less than last year, the quality of the crop this year being more uniform. No standards were made for Extra Manitoba Hard nor for No. 1 Northern, but any grain shipped equal to these grades will be graded according to the act. The three grades of "Regular" now drop out of existence; also the grade of No. 1 Rejected. A few frosted samples were shown, which led to the establishing of two grades for frosted wheat, so that this class of grain might be kept by itself at storage points, according to grade. Smutty wheat will be graded No. 1 Hard Smutty, No. 2 Hard Smutty, etc., as the case may be, and an effort will be made to keep them separate instead of classing all smutty wheat as "Rejected." No grade of No. 3 Northern was fixed. This grade is not provided for in the act. Standards for two grades of oats were fixed. The wheat standards, all around, are decidedly superior to the standards of last year for the corresponding grades.

The General Inspection Act of Canada, Chap. 99, Vic. 1886, gives the following general rules for the inspection of wheat; inspectors being guided by these rules as well as by the standards fixed annually for each crop:

Extra Manitoba Hard Wheat shall be sound and well cleaned, weighing not less than 62 pounds to the bushel, and shall be composed of at least 85 per cent. of Hard Red Fife Wheat, grown in Manitoba or the Northwest Territories of Canada.

No. 1 Manitoba Hard Wheat shall be sound and well cleaned, weighing not less than 60 pounds to the bushel, and shall be composed of at least two-thirds of Hard Red Fife Wheat, grown in Manitoba and the Northwest Territories of Canada.

No. 2 Manitoba Hard Wheat shall be sound and reasonably clean, weighing not less than 58 pounds to the bushel, and shall be composed of at least two thirds of Hard Red Fife Wheat, grown in Manitoba or the Northwest Territories of Canada.

No. 1 Hard White Fife Wheat shall be sound and well cleaned, weighing not less than 60 pounds to the bushel, and shall be composed of not less than 60 per cent. of Hard White Fife Wheat, grown in Manitoba or the Northwest Territories of Canada, and shall not contain more than 25 per cent. of soft wheat.

No. 1 Manitoba Northern Wheat shall be sound and well cleaned, weighing not less than 60 pounds to the bushel, and shall be composed of at least 50 per cent. of Hard Red Fife Wheat, grown in Manitoba or the Northwest Territories of Canada.

No. 2 Manitoba Northern Wheat shall be sound and reasonably clean, of good milling qualities and fit for warehousing, weighing not less than 58 pounds to the bushel, and shall be composed of at least 50 per cent. of Hard Red Fife Wheat, grown in Manitoba or the Northwest Territories of Canada.

No. 1 Spring Wheat shall be sound and well cleaned, weighing not less than 60 pounds to the bushel.

No. 2 Spring Wheat shall be sound and reasonably clean, weighing not less than 58 pounds to the bushel.

No. 3 Spring Wheat shall comprise all wheat fit for warehousing, not good enough to be graded as No. 2, weighing not less than 56 pounds to the bushel.

Rejected Spring Wheat shall comprise all wheat fit for warehousing but too low in weight or otherwise unfit to be graded as No. 3.

Goose Wheat No. 1 shall be plump and well cleaned, weighing not less than 61 pounds to the bushel.

Goose Wheat No. 2 shall be plump and reasonably well cleaned, weighing not less than 59 pounds to the bushel.

Goose Wheat No. 3 shall comprise such as is not good enough to be graded as No. 2, reasonably clean and weighing not less than 55 pounds to the bushel.

The Interstate Corn Palace and Fair Association has been organized at Sioux City, Ia., with \$100,000 capital, to succeed the Corn Palace Association, which has made that metropolis famous.

Miscellaneous * Notices.

DIRECTORY OF GRAIN DEALERS.

Kingsley's Directory is the only complete work containing the name and address of every firm engaged in the following lines of business: Grain, milling, flour and feed, hay and straw, butter and eggs, fruit and produce, malting, brewing, distilling and poultry. New edition, thoroughly revised. Over 500 pages octavo, substantially bound in cloth. Indispensable to those who wish to reach the lines of business named above.

Price, \$3.50. Sent postpaid on receipt of price. Address LEE KINGSLEY & Co., Syracuse, N. Y.

DAVIS' GRAIN TABLES.

The value of wheat or any grain at 60 pounds to the bushel, for any amount less than 100 bushels is shown without addition or multiplication, and for any amount over 100 and under 1,000 bushels, with but a single addition; at any price from 25 cents to \$1.25 per bushel. The value of bushels and pounds of other grain also is shown at 56, 48 and 32 pounds to the bushel at any price from 15 cents to \$1.50 per bushel. Price, postpaid, \$1.25. Address

E. D. DAVIS, Room 63, Chamber of Commerce, Minneapolis, Minn.

DEMUTH'S DOUBLE ENTRY SYSTEM FOR RECORDING WEIGHTS.

If you know your scale is reliable the next thing to know is that your record is reliable. How are you to know this? Make a double entry of your weights. That is all. That is what your bookkeeper does; why should not your weighman do it? With this system the weighman can no longer be suspected of having made a mistake when he has not. He can show you the proof! That is why weighmen everywhere endorse the system. Moreover, there is no machinery about. It is not automatic. It is a simple common sense system. Parties ordering new scales of the Fairbanks make should remember to give a special order for the Demuth Check Scale Beam. Parties having scales already in use can adopt this system by using Demuth's New Cipher Beam. Effectual and inexpensive. For further information address

J. A. DEMUTH, Oberlin, O.

FOR SALE.

SECOND-HAND MACHINES.

One No. 3 Barnard & Leas Warehouse Dustless Wheat Separator, and one No. 5 Excelsior Oat Clipper, Separator and Grader combined, both machines in good condition about as good as new, for sale cheap. Address

IRVING W. FOX, Rochester, Minn.

RUBBER BELT CONVEYOR AND ATTACHMENTS.

A nearly new forty-inch, four-ply, rubber belt conveyor, 125 feet long, including iron driving and tail pulleys, iron concave rollers, three iron concentrators, journal boxes, etc., all complete. Will be sold cheap. Address

MANN BROS. & Co., Buffalo, N. Y.

LINE OF GRAIN HOUSES.

A line of grain houses, consisting of elevators, warehouses, corn cribs, coal houses, stock yards, scales, offices, etc., at 26 stations in Iowa, Minnesota and Dakota, and now in successful operation, is offered for sale. Price reasonable, and satisfactory reasons given for selling. Address

LINE OF ELEVATORS, care AMERICAN ELEVATOR AND GRAIN TRADE, Chicago, Ill.

STEAM MILL.

To close an estate I will sell at a great bargain a steam roller mill with 75 barrels' capacity, 2 hurs, 4 sets 6x15-in. Stevens Rolls and all machinery as good as new. Storage capacity 10,000 bushels. Built in fall of 1889. No competition in grain. Located on the Lake Erie & Western and Chicago & Grand Trunk railroads in La Porte Co., Ind., sixty miles east of Chicago and in one of the best wheat-growing sections of the state. Remember, this property must be sold. Address

S. S. BOSSERMAN, Admr., La Porte, La Porte Co., Ind.

FOR SALE.

THREE GRAIN ELEVATORS

In Western Iowa on C. & N. W. R. R.

MARTIN D. STEVERS & CO.

COMMISSION MERCHANTS,

218 La Salle St., - CHICAGO.

ORDER YOUR COAL FROM



TO POULTRY RAISERS.

The Complete Poultry Manual is a neat little work which is well worth reading by those interested in poultry, or by boys or girls who want to turn an honest penny. The price is only 25 cents. Sent postpaid on receipt of price. Address

MITCHELL BROS. CO.,
184 Dearborn Street. Chicago, Ill.

COMMISSION CARDS.

D. C. STEWART.

Grain and Commission,
Proprietor IRON CITY GRAIN ELEVATORS,

Capacity, 300,000 Bushels.

LIBERAL ADVANCES ON ALL CONSIGNMENTS.
CORRESPONDENCE SOLICITED.

Office, 1019 Liberty Street, - PITTSBURGH, PA.
ESTABLISHED 1871.

Grain for Seed, Feed and Milling.

E. R. ULRICH.

E. R. ULRICH, JR.

E. R. ULRICH & SON,

Western Grain Merchants

And Shippers of Choice Milling White or Yellow Corn,

Also Mixed Corn, White Oats, Mixed Oats and Choice Red Winter Milling Wheat. Elevators and Storage along the Line of Wabash Ry., J. S. E. Ry., Pawnee Ry., and St. L. N. & S. Ry. in Central Illinois.

Office, First National Bank Building,

SPRINGFIELD, - ILLINOIS.

Robert McKnight & Sons,
Commission Merchants,

—AND DEALERS IN—

FLOUR, GRAIN AND FEED,

Nos. 2106 & 2108 Market St., PHILADELPHIA.

REFERENCES: { Merchants' and Third National Banks,
PHILADELPHIA.

R. R. CORDNER,

MIDDLETOWN, N. Y.,

BUYS

Corn, Oats, Feed in Bulk
or Sacked, Grass Seeds,
Baled Hay, Straw and
any salable Produce in
CAR LOTS.

Sales made to all points in Orange, Sullivan and Delaware Counties,
N. Y., and will represent first-class shippers in this territory.
Agency for Special Feeds desired.

REFERENCE: Merchants' and Manufacturers' Bank.

COMMISSION CARDS.

J. J. BLACKMAN.

G. W. GARDINER.

J. J. BLACKMAN & CO.,

Commission Merchants,

Wheat, Corn, Oats, Screenings, Hay, Seeds
and Corn Goods.

95 Broad St., Rooms 604 & 605,

NEW YORK.

LEMAN BARTLETT.

O. Z. BARTLETT.

L. BARTLETT & SON,

Grain and Produce Commission Merchants

BARLEY a Specialty.

Room 23, Chamber of Commerce Bldg, Milwaukee, Wis.

Careful attention given to orders from Brewers, Malsters and Millers.

BELTZ BROS.,

— SHIPPERS OF —

Grain, Flour and Mill Feed.

Corn Exchange,

MINNEAPOLIS, MINN.

A. B. TAYLOR & CO.,

SHIPPERS OF

GRAIN AND MILL FEED,

Room 17, Chamber of Commerce,

MINNEAPOLIS, - - MINNESOTA.

JONATHAN HAVENS, Jr.,

Commission Merchant,

BUYER AND SELLER OF

CORN, OATS AND BALED HAY,
WASHINGTON, N. C.

REFERENCE: Norfolk National Bank.

ESTABLISHED 1866.

JOSEPH GOOD,
COMMISSION MERCHANT

For the Sale of Wheat, Corn, Rye, Barley, Oats, Hay, Mill
Feed and Seeds, Etc.

67, 68 and 69 Mitchell Building, 99 West Fourth Street,

CINCINNATI, OHIO.

Refer to National Lafayette Bank.

O. V. ECKERT.

JAS. MCCLLENAGHAN.

J. C. WILLIAMS.

ECKERT, WILLIAMS & CO.,

WHOLESALE COMMISSION

And Dealers in Corn, Oats, Flour, Mill Feed, Hay, Etc.

Liberal Advances Made on Consignments.

Office and Warehouse, 309 & 311 Lake Ave., DULUTH, MINN.

TELEPHONE 333-1.

REFERENCE: { Bradstreet Mercantile Agency.
State Bank of Duluth.

COMMISSION CARDS.

CENTRAL ELEVATOR AND WAREHOUSE.

CALLAHAN & SONS,

ESTABLISHED 1856.

Corn, Oats, Rye, Hay,
Mill Feed, Flour.

WILL MAKE LIBERAL ADVANCES ON CONSIGNMENTS

14th and Magazine Sts., Louisville, Ky.

C. F. & G. W. EDDY,

COMMISSION MERCHANTS,

Grain and Feed, Hay and Straw,

CHAMBER COMMERCE, BOSTON.

Correspondence and Consignments Solicited.

Reference:—Commercial Agencies; Lincoln Nat'l Bank, Boston;
National Exchange Bank, Boston.

Established 1863.

E. L. ROGERS & CO.,

Commission Merchants,

FLOUR, GRAIN, SEED, HAY,

135 S. Second Street, - (Chamber of Commerce Building)

PHILADELPHIA, PA.

Liberal Advances made on consignments. Market reports furnished gratuitously on application. Correspondence Solicited.

REFER TO SEVENTH NATIONAL BANK OF PHILADELPHIA.

J. H. VANNERSON.

Established in 1870.

J. W. HILLIS.

VANNERSON & CO.,
COMMISSION MERCHANTS AND BROKERS,

GRAIN, HAY, FLOUR and PROVISIONS.

Elevator and Warehouse on Georgia R. R. Track.

Direct Communication with all Railroads Entering the City.

CASH ADVANCES MADE.

FACILITIES UNSURPASSED.

AUGUSTA, GA.

REFER BY PERMISSION TO Georgia Railroad Bank, Augusta, Ga.; National Bank of Augusta, Augusta, Ga.

PATTERSON & EVANS,

GRAIN.

SEEDS.

POINTERS: We Sell on
Commission Only.
No Competition between you
and us.

Do You Buy and Sell Clover,
Timothy, and Other
Grass Seeds?

Write us, we are Dealers.

44 Vine Street, - - CINCINNATI, O.

REFERENCE—The Ohio Valley National Bank.



Grain
and
Elevators.

F. H. PEAVEY & CO.,

MINNEAPOLIS,

MINN.

CABLE ADDRESS "BARTOL"
PHILADELPHIA.

GEORGE E. BARTOL CO.,
LIMITED.

No. 139 South Front Street,
PHILADELPHIA, PA.

Grain Receivers and Exporters.

General Commission Merchants.

RECEIVERS AND SHIPPERS OF LINSEED CAKE, CORN FLOUR, AND STARCH, VIA NEW YORK, BALTIMORE AND PHILADELPHIA.

Cash advances made. Daily Market Report mailed free. Connections in all the leading foreign markets ordering daily. Grain and Seeds of every grade

YORK FOUNDRY & ENGINE CO., YORK, NEB.

Manufacturers of all kinds of

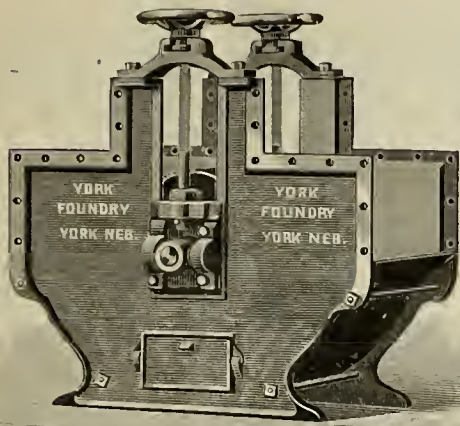
GRAIN ELEVATOR MACHINERY AND SUPPLIES.

COMPLETE OUTFITS CARRIED IN STOCK,

INCLUDING

ENGINES AND BOILERS

UP TO 30 H. P.



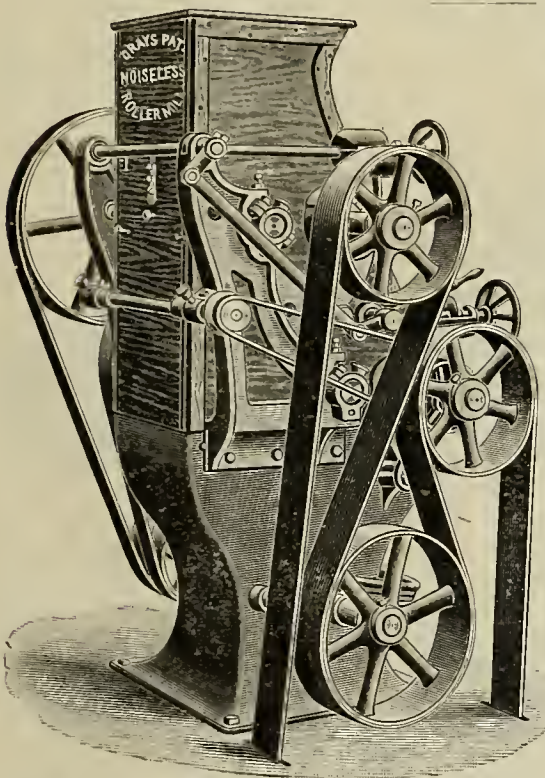
SEND FOR CATALOGUE.

HORSE POWERS, FANNING MILLS, CUPS, BOLTS, SPOUTS, CAR MOVERS,
GRAIN TESTERS, SHAFTING, POWER CONNECTIONS,
PIPE AND STEAM FITTINGS, PULLEYS, SPROCKET WHEELS, RUBBER,
LEATHER AND LINK BELTING.

CORN AND FEED ROLLS

FOUR SIZES: 6x12, 9x14, 9x18, 9x24—TWO BREAKS EACH.

DO YOU NEED ONE THIS FALL?



Fast Grinders.
Fine Grinders.
No Stone Dressing
They Save Time,
Power and
Attention.

Our Prices Will Surely Win Your Order.

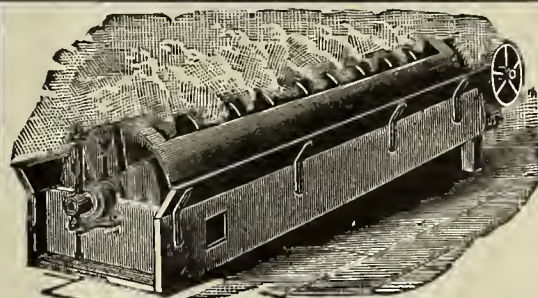
T. O. KILBOURN of Spring Valley, Minn.,
says: "I am grinding 75 bushels of mixed
feed by the watch on a 9x18 Allie 2-break
Roller Mill."
Hundreds of other users speak as highly.

TRY US ON
SHAFTING, PULLEYS,
BELTING,
AND ALL KINDS OF
MILL AND ELEVATOR
SUPPLIES.

THE EDWARD P. ALLIS CO.,

Reliance Works,

MILWAUKEE, WIS.

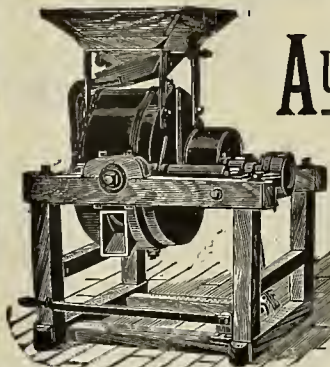


STEAM DRYER

For Cornmeal, Hominy, Buck-
wheat, Rice, and all kinds of
Cereal Products; also Sand,
Coaldust, etc.

Drying Cylinder made entirely of
Iron. The machine has few parts
and is not liable to get out of order.
Automatic in its operation, requiring
no attention. Double the capacity of
any other Dryer sold for same price.

USED AND RECOMMENDED BY LARGEST AND BEST MILLS.



Automatic Adjustment Mill.

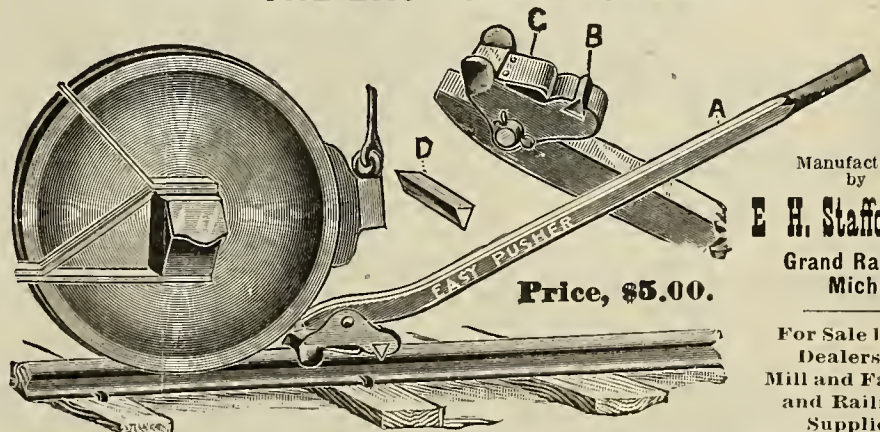
The adjustment is positive and automatic, utilizing
every part of the grinding surfaces. Can be started or
stopped at pleasure, without stopping the power. Is
dressed without taking the shaft out of its boxes, or the
belt off the pulley.

Comprises all Recent Improvements for
Producing Goods at Lowest Cost.

SEND FOR CIRCULAR.

THE CUTLER CO., North Wilbraham, Mass.

TIME IS MONEY: YOU CAN SAVE TIME BY USING
THE EASY CAR PUSHER.



Manufactured
by
E. H. Stafford Co.,
Grand Rapids,
Mich.

Price, \$5.00.

For Sale by all
Dealers in
Mill and Factory
and Railroad
Supplies.

YOU CAN MOVE CARS EASIER AND IN LESS TIME WITH THE
"EASY PUSHER" THAN WITH ANY OTHER ON THE MARKET.

C. D. HOLBROOK,

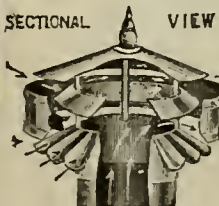
DEALER IN

Grain Elevator Machinery and Supplies

Room 4, Corn Exchange, Minneapolis.

SPECIALTIES: Steam and Gas Engines, Car Pullers, Oat Clippers, "Automatic" Power
Grain Shovels, Improved Excelsior Combined Elevator, Separator for all kinds of Grain, Double
and Quadruple Flax Reels, Combination Flax and Grain Cleaners, Improved Cockle Machines.
Carry in Stock full line of Shafting, Hangers, Pulleys, Sprockets, Elevator Boots, Tanks,
Link and Rubber Belting, Farm and Warehouse Fanning Mills, Sweep, Overhead and Tread Horse
Powers, Extras of all kinds for Horse Powers, Hand and Power Corn Shellers and Feed Mills, Plat-
form, Wagon and Elevator Scales, Flexible Loading and Shipping Spouts, Steel Scoops, Pinch Bars,
Grain Samplers, Grain and Seed Testers, Bag Holders, Bag Trucks, Etc.

The "STAR VENTILATOR"



SECTIONAL VIEW
Galvanized
Iron,
Copper
or Brass.
Down Draughts
Prevented.

For Ventilating
Mills, Factories,
Foundries, Breweries, also Churches, School-
houses, Theatres—in fact all kinds of buildings,
none equal the "Star."

A cheap Ventilator which will not do the
work required, is costly at any price; our claim
for Superiority of the "Star" Ventilator is
based on Merit only—believing the first cost
to be a secondary consideration.

Send for a copy of our little book
on Ventilation.
- MERCHANT & CO.
Philadelphia. New York. Chicago. London.



PERFORATED

METALS

OF ALL KINDS.

The Robert Aitchison Perforated Metal Co., Chicago, Ill.



ENGINES & BOILERS

Stationary & Semi-Portable.

8 to 25 HORSE-POWER.

High in Grade.

Low in Price.

Send for Pamphlet.

The W. C. LEFFEL CO.

Greenmount Ave., Springfield, O.

GEO. F. I. HILDEBRAND

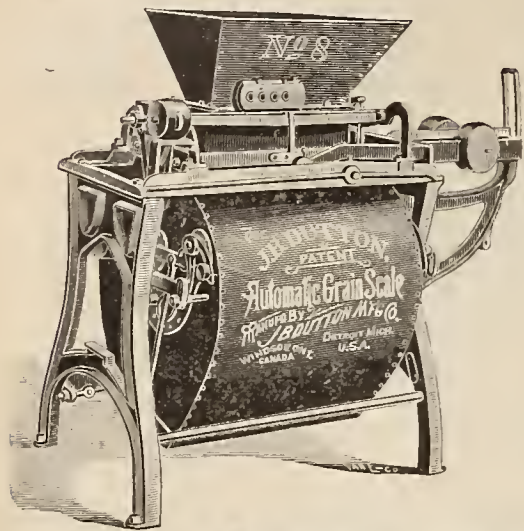
SPECIALTY: Designer and Constructor of Flour

Mills, Pearling Mills, Oil Mills,

ELEVATORS,

Breweries, Malting Plants, Distilleries,
Factories, etc. Get my prices on machinery, as
you may save money by it.

6629 Evans Ave., Chicago, Ill.



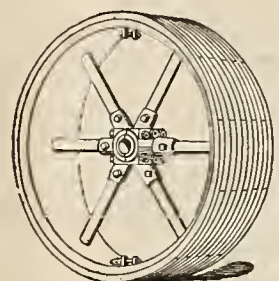
J. B. DUTTON'S Patent Automatic Grain Scale,

FOR USE IN
ELEVATORS, DISTILLERIES, MALT HOUSES, FLOUR MILLS, ETC.
ACCURATE AND RELIABLE AT ALL TIMES. SCALES SENT ON 30 DAYS' TRIAL.
SEND FOR CIRCULAR AND PRICE LIST.

ADDRESS:

J. B. DUTTON, 111 & 113 West Congress St., DETROIT, MICH.

Conveying, Elevating and Power Transmission Machinery.

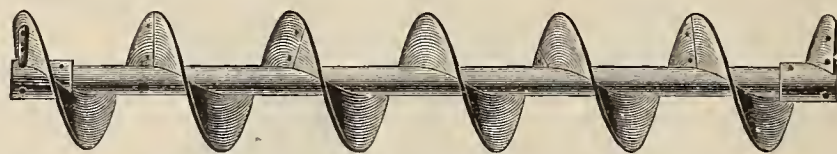


"South Bend"
Wood Split Pulleys,
With Iron Hubs
and Iron Bushings.
Will Not Slip on
Shaft. No Danger
From Fire.

H. W. CALDWELL & SON CO.,

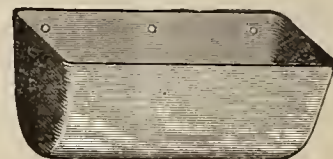
GENERAL MACHINISTS,

127, 129, 131, 133 WEST WASHINGTON STREET, CHICAGO, ILL.

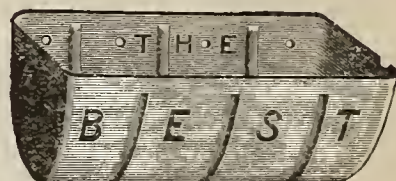


CALDWELL STEEL CONVEYOR,
AUTOMATIC POWER GRAIN SHOVELS.

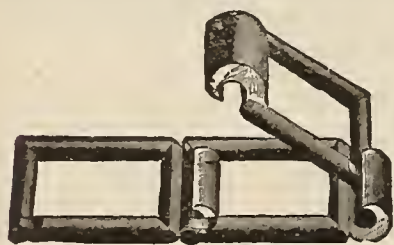
LARGE AND COMPLETE STOCK FOR IMMEDIATE SHIPMENT.



AVERY PLAIN
AND CALDWELL-AVERY
CORRUGATED
SEAMLESS STEEL
ELEVATOR
BUCKETS.



SPROCKET WHEELS, LINK BELTING, COTTON, RUBBER AND LEATHER BELTING, ELEVATOR BOOTS,
BOLTS AND BUCKETS, SPOUTS, GEARING, FRICTION AND JAW CLUTCHES, HANGERS, SHAFTING,
PILLOW BLOCKS, IRON PULLEYS, SET COLLARS, TAKE UP BOXES, TURN HEADS, PERFORATED METAL, WIRE CLOTH, ETC.



JEFFREY

Chain Belting.

ALSO

Malleable, Steel,

Wrought and Special

CHAINS.

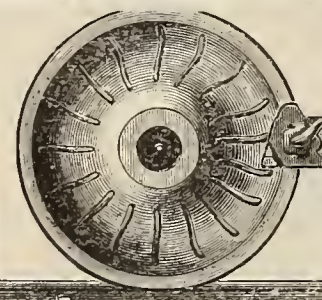
Send for Reduced Price List.

**ELEVATORS,
CONVEYORS.**

The Jeffrey Mfg. Co.

COLUMBUS, OHIO.

Chicago Branch, 48 South Canal St.
New York Branch, 163 Washington St.



THE CHICAGO CAR MOVER.

This is the
Reliable
Car Mover.

Made strong, and one or two men can be placed at the
lever as need be, and cars moved easily. No slipping
on icy tracks. Warranted to stand. Address

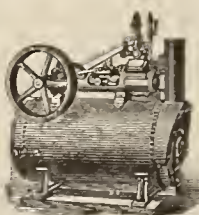
CHAS. T. BARNES,
325 W. Monroe St., CHICAGO.

ROPER'S PRACTICAL HAND-BOOKS FOR ENGINEERS

Hand-Book of Land and Marine Engines.....	Price, \$3 50
Hand-Book of the Locomotive.....	" 2 50
Catechism of High-Pressure Steam Engines.....	" 2 00
Use and Abuse of the Steam Boiler.....	" 2 00
Engineer's Handy-Book.....	" 3 50
Questions and Answers for Engineers.....	" 3 00
Care and Management of Steam Boilers.....	" 2 00
Instructions and Suggestions for Engineers.....	" 2 00
The Young Engineer's Own Book.....	" 3 00

These books embrace all branches of Steam Engineering—Stationary, Locomotive, Fire and
Marine. Any engineer who wishes to be well informed in all the duties of his calling, should provide
himself with a full set. They are the only books of the kind ever published in this country, and they
are so plain that any engineer or fireman that can read can easily understand them. Address

MITCHELL BROS. CO., 184 Dearborn St., CHICAGO.



ELEVATOR ENGINES.

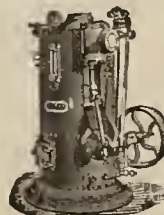
Upright and Horizontal, Stationary and Semi-Portable.

ALL SIZES UP TO TWENTY-SIX HORSE POWER.

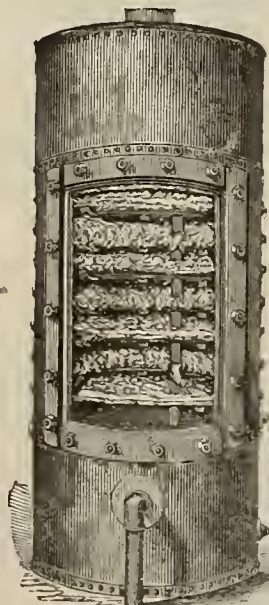
Illustrated Pamphlet sent free. Address,

JAMES LEFFEL & CO., Springfield, Ohio.

Eastern Office: 110 Liberty St., New York.



STILWELL'S PATENT LIME EXTRACTING HEATER AND FILTER COMBINED.



Is the ONLY
LIME-EXTRACTING
HEATER
that will prevent
Scale in
Steam Boilers.
Removing all im-
purities from
the water before
it enters the
Boiler.

Thoroughly Tested.

OVER 8,000

of them in daily use

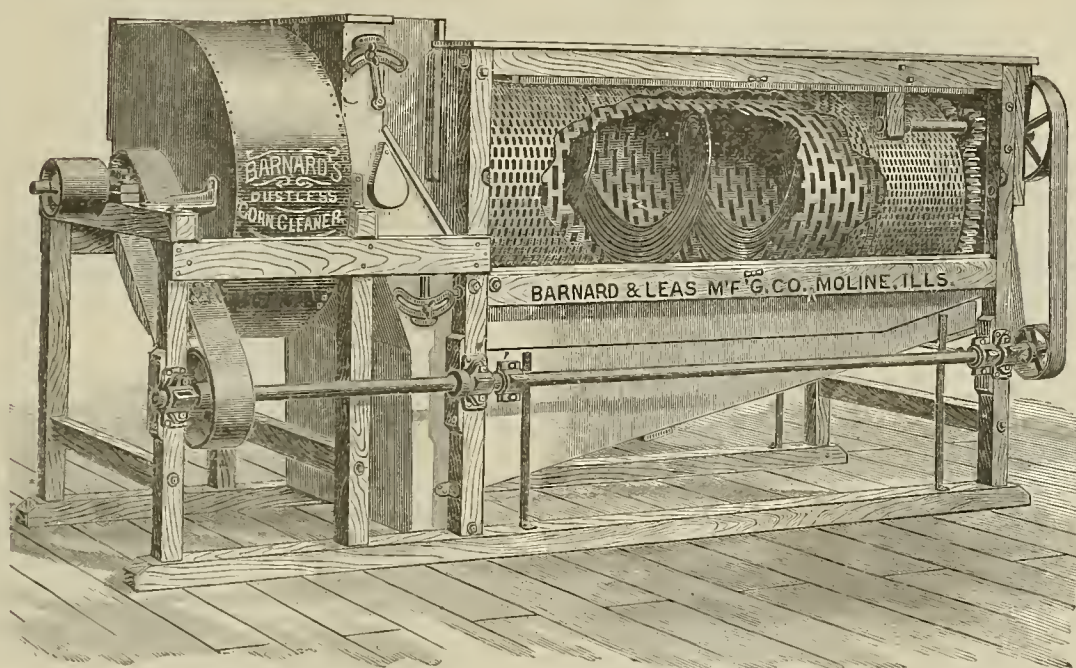
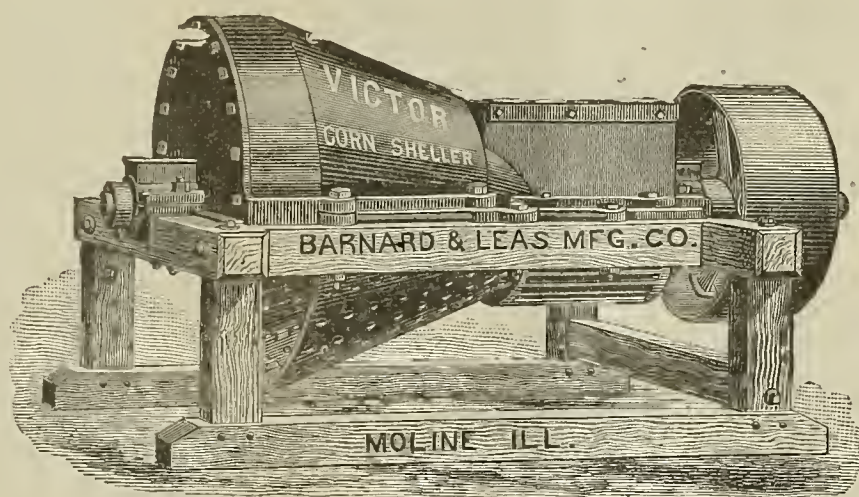
This cut is a fac-
simile of the appear-
ance of a No. 5 Heat-
er at work on ordi-
nary lime water,
when the door was
removed after the
Heater had been run-
ning two weeks.
Illustrated Cata-
logues.

**STILWELL & BIERCE MFG. CO.,
DAYTON, OHIO.**

AGENTS WANTED
This is THE
**QUAKER CITY
GRINDING MILL**
For CORN and COBS,
FEED and TABLE
MEAL. Send for all
mills advertised. Keep the
best and return all others.
A. W. STRAUB & CO.
Philada., Pa. and 51 S. Jefferson St., Chicago, Ill.

HERE IS THE BEST

Corn Sheller and Cleaner on earth. Be sure and send your orders to Barnard & Leas Mfg. Co., and get the best.



MANUFACTURED ONLY BY

BARNARD & LEAS MFG. CO.,

MOLINE, - - - ILLINOIS.

— AGENTS —

J. F. PAYNE,
Room 3, Chamber of Commerce, INDIANAPOLIS, IND.

F. G. WALLACE,
Produce Exchange, TOLEDO, OHIO.

JOHN SYPHERS, Henderson, Ky.

CHAS. E. MANOR, Stanleyton, Page Co., Va.

CHAS. KEMP, Moroni, San Pete Co., Utah.

WM. R. DELL & SON, 26 Mark Lane, London, E. C., England.

THE WATEROUS ENGINE WORKS CO., Winnipeg, Manitoba.

JOHN ABELL, Toronto, Canada, Sole Manufacturer for the Dominion of Canada.

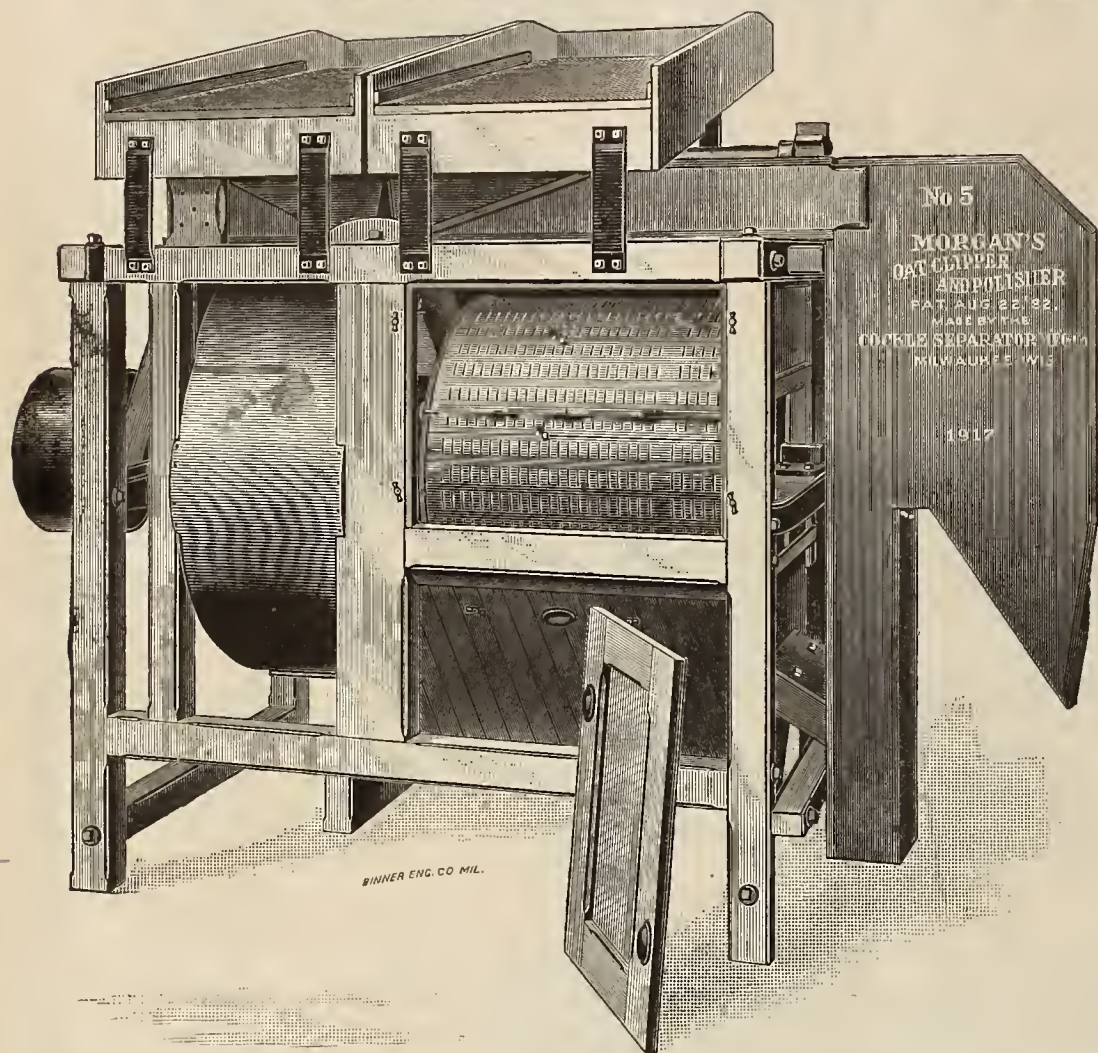
M. M. SNIDER,
1323 Capitol Avenue, DES MOINES, IOWA.

R. C. STONE, Springfield, Mo.

STUART HARE, Enterprise, Kan.

J. M. ALLEN, Lisbon, North Dakota.

THE MORGAN OAT CLIPPER.



The best on the market. Has largest capacity; does most even clipping and requires less power than any clipper manufactured.

It will pay parties in need of such a machine to write us. Prices have been *greatly reduced*.

COCKLE SEPARATOR

MANUFACTURING COMPANY,

MILWAUKEE, WIS.

\$2.00



PUBLISHED THE FIRST DAY OF EVERY MONTH.

ESTABLISHED IN 1873.

The Best Exponent of Modern Milling.

SUBSCRIPTION PRICE,

\$2.00 PER YEAR.

Each number is worth the cost of an entire year's subscription to every man in the trade.

SEND FOR SAMPLE COPY.

ADDRESS,

\$2.50

— FOR —

BOTH

FOR ONE YEAR.

You can get such value nowhere else for your money. Many readers want a paper that comes twice a month. THE AMERICAN MILLER and THE ELEVATOR are offered at less than such a paper could be given for. You need them both in your business.

\$2.50

Two Papers a Month.

\$1.00



PUBLISHED THE FIFTEENTH OF EVERY MONTH

ESTABLISHED IN 1882.

SEND FOR A SAMPLE COPY.

Every miller is more or less interested in the Grain Trade. THE AMERICAN ELEVATOR AND GRAIN TRADE is the only paper of its class in the field.

MITCHELL BROS. CO.

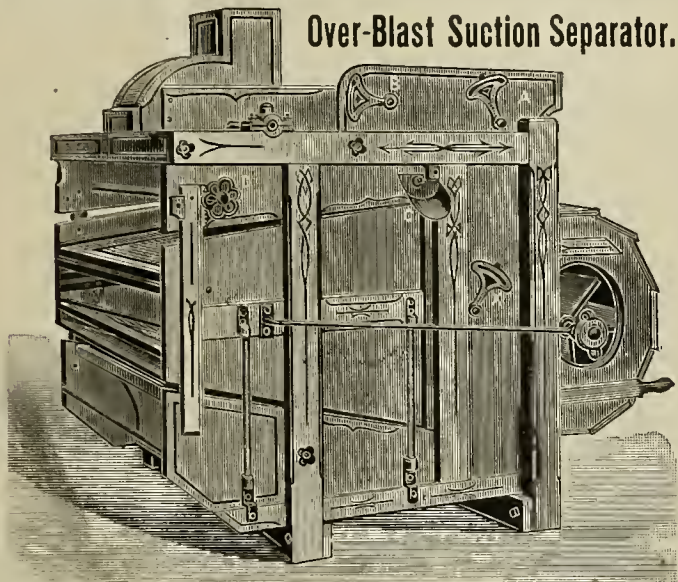
PUBLISHERS,

184 & 186 Dearborn St., CHICAGO, ILL.

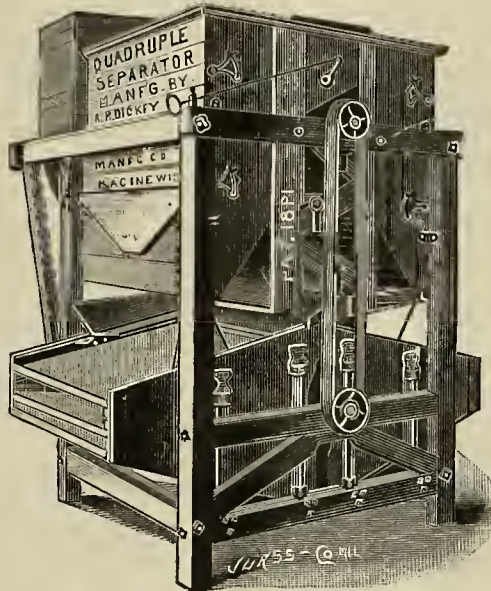
THE CELEBRATED A. P. DICKEY GIANT GRAIN CLEANERS, THE STANDARD IN THEIR LINE.

"GRAIN CLEANED TO A STANDSTILL."

Manufactured in any desired size and pattern, with capacities to accommodate the largest Elevator and Flouring Mills, or small Warehouses for hand use. Single and Double. End and Side Shake, and Dustless Separators, both Under and Over Blast.



Over-Blast Suction Separator.

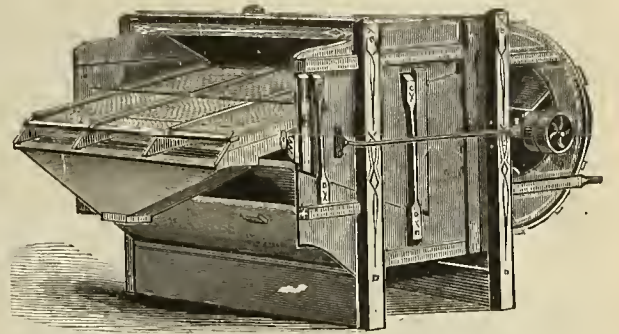


The Quadruple Suction Dustless Separator. Four separate suctions, independent of each other with sieves and screens, requiring less power, less floor space, lower in height, needing less bracing, has better and more perfect separations, and furnished with the only perfect force feed and mixer on the market. Guaranteed to clean Grain to any desired standard without waste once through this machine twice as well as any machine made.

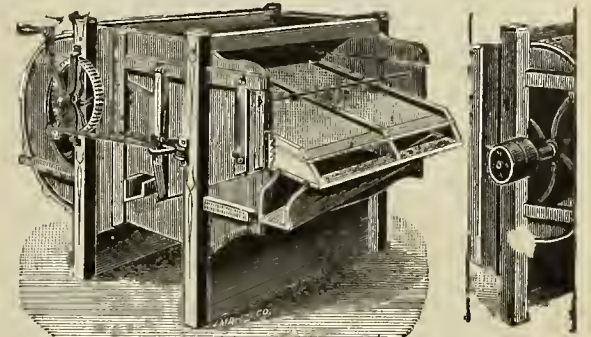
We have given the No. 4 Quadruple a fair trial on hot corn. We raised the grade from no grade to No. 3 on 17 cars out of 20 by running through once. We think it is the machine to handle grain through as it does not make any difference if it is damaged the machine will take the most of it out. Yours truly,
Pickrell, Neb. COTNER & WHITE.

For Circulars and Prices address

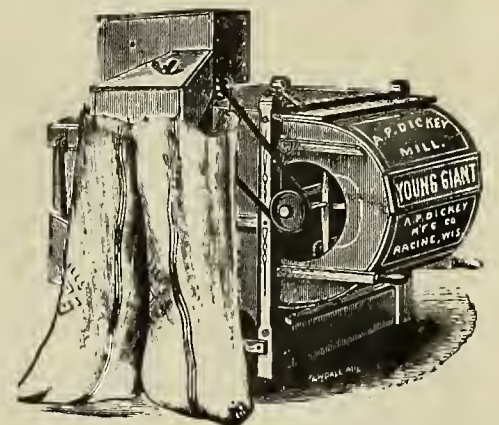
A. P. DICKEY MFG. CO., - - - Racine, Wis.



The Famous "End Shake" Mill for Power only.



For Hand Use or Power.

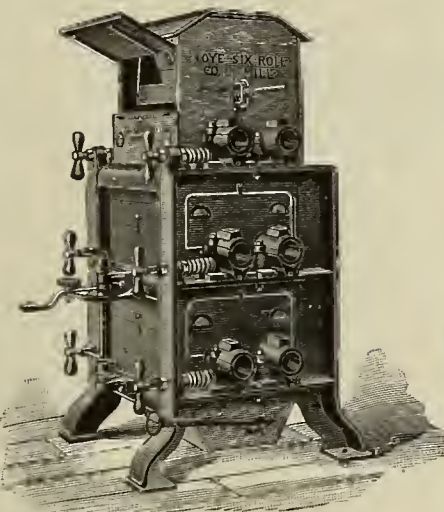


For farm use, with or without Baggers and Elevators. These machines cannot be beat for the purpose of testing in large Elevators.

FOR GRINDING

Wheat, Oats, Corn, Rye, Barley, etc., there is, we believe, no machine equal in capacity, in quality of work and in durability to the

**Noye
Six-Roll
Corn AND Feed Mill.**



ELEVATOR

Heads, Boots, Belts, Buckets, Bolts, Power and Transmission Machinery, Complete Power Plants and General Furnishings, we can supply promptly and at reasonable prices.

**THE JNO. T. NOYE MFG. CO.,
BUFFALO, NEW YORK.**

CHICAGO OFFICE, 66 So. Clinton Street.

UNDOUBTEDLY

The Best Grain and Seed Testing
Scales on Earth.

U. S. STANDARD.

We manufacture more Grain and Seed Testing Scales than any firm in the United States. They are positively accurate, and have been adopted by different Boards of Trade throughout the country.

We manufacture them in four sizes; one-half pint, one pint, one quart, and two quarts.

DIRECTIONS FOR USING.

For weight of grain per bushel, take from sample to be tested and fill the brass bucket carefully (not pressing down), and with the beam strike off the grain evenly, then weigh same, using the slide weight. On getting an Even Balance you will have the weight in pounds per bushel. Thus, if balanced at sixty, it would indicate sixty pounds to the bushel, etc. Always be careful not to Pack Grain in the Bucket.

We Make a Specialty of Supplying the Wholesale Trade.

We make the most accurate and best Flax Seed Scale in the market.

—WRITE FOR PRICES.—

CINCINNATI SCALE MFG. CO., 37 W. Pearl St., CINCINNATI, O.

THORNBURGH MFG. CO., 110 & 112 S. Jefferson St., CHICAGO, ILL.
WESTERN AGENTS.



SAY!



When you rebucket your elevators or build a new one, don't make a mistake about the kind of buckets you order.

IF YOU GET THE "SALEM" You will be all right.

They are the best and cost no more than others.

W. J. CLARK & CO., Salem, Ohio.

THORNBURGH MFG. CO., Chicago, Ill.



Estimates furnished on application for
Transfer, Mixing and Storage Elevators.

We invite inspection of our designs and solicit correspondence, respecting
the construction of Grain Elevators.

ROOM 424, BEERY BLOCK, MINNEAPOLIS, MINN.

J. A. CAMPBELL.

CLYDE T. CAMPBELL

OVER 30 YEARS' EXPERIENCE.

J. A. CAMPBELL & SON.,

3117 N Street, LINCOLN, NEB.,

DESIGNERS AND BUILDERS OF

GRAIN ELEVATORS,

Modern in Design, Durable in Construction, and Eco-
nomical and Convenient to Operate.

We use our own inventions to secure durability and convenience. Write us for
full specifications and estimates and save a heavy expense in remodeling or operating
a wasteful and ill-contrived elevator.

THE OLD WAY.



For NEW and BEST Way
ADDRESS

UNION IRON WORKS,

DECATUR, ILL.,

Manufacturers of the CELEBRATED

Western Shellers and Cleaners

The "Best in the World."

Elevator Supplies of All Kinds a
Specialty.

We are the Pioneer Elevator Builders of the
West, and claim priority in the building of
Cheap Elevators with Increased Convenience.
Don't BUILD until you get our Plans and Prices.

Write for Catalogue.

Steel and Iron **ROOFING** Painted or Galvanized.

5 KINDS.

Roll Cap Roofing.

Standing Seam, etc.

V Crimp Roofing.

Iron Weatherboards,

Beaded Ceiling, etc.

Painted and Galvanized **CORRUGATED IRON.**

CHICAGO STEEL & IRON ROOFING CO.,

WRITE FOR PRICES.

269 Dearborn Street, Room 316.

IF YOU ARE { A MILL OWNER, } **YOU CANNOT AFFORD TO**
{ A MILLER. } **DO WITHOUT THE**
{ A MILLWRIGHT, }

AMERICAN MILLER.

Subscription Price,
Only \$2.00 Per Year. }

MITCHELL BROS. CO., 184 Dearborn St., CHICAGO, ILL.

SIMPSON & ROBINSON,

412 SOUTH THIRD STREET,
MINNEAPOLIS, - - MINNESOTA.

Architects and Builders

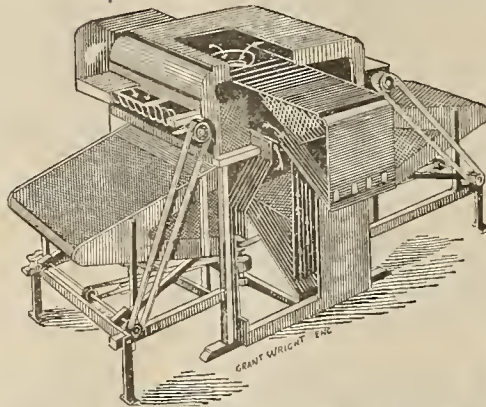
OF ALL KINDS OF
Transfer, Mixing, Cleaning, Storage, Marine and Country
ELEVATORS.

THE STEVENS MFG. CO.,

MANUFACTURERS OF FULL LINE OF

Mill and Elevator Machinery

PEORIA, - ILLINOIS.



Manufacturers of the Stevens Elevator
Separator, Warehouse Separator,
Milling Separator in Capacities from
40 to 3,500 bushels per hour.

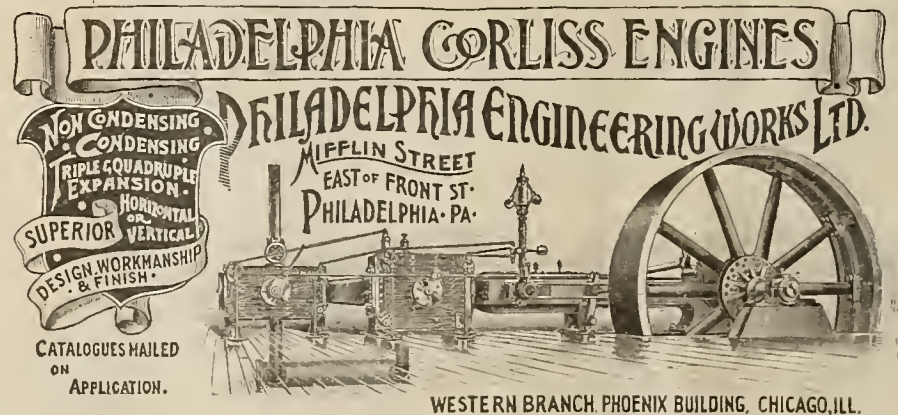
OUR NEW **OAT CLIPPER**

will clip and clean perfectly one-half more oats
per hour, with the same power, than any other
machine now on the market.

We fully guarantee all our machines to per-
form their work equal to any of the modern
machines now on the market. All our ma-
chines are well built, strong and durable.

Write Us For Prices Before Ordering Elsewhere.

N. B.—Elevator and Mill Supplies of Every Description
furnished PROMPTLY.



FRANK KAUCHER,

GRAIN ELEVATOR ARCHITECT,

A Complete Plant of Any Known Capacity Under One Contract.

410 German American Bank Bldg.,

TELEPHONE No. 225.

ST. JOSEPH, MO.



The Barnett & Record Co.,

Architects and Builders of

GRAIN ELEVATORS

CIRCULAR AND SQUARE ELEVATORS,

For Receiving Grain in Country Towns.

TRANSFER, MIXING AND STORAGE ELEVATORS,

We issue no catalogue, but have a large assortment of plans to submit on short notice.

CORRESPONDENCE SOLICITED.

37 & 38 Corn Exchange,

MINNEAPOLIS.

460 Drake Block,

ST. PAUL.

JAMES STEWART & CO.,

ST. LOUIS, MO.,

DESIGNERS AND BUILDERS

—OF LARGE—

GRAIN ELEVATORS,

PILE DRIVING AND DOCK BUILDING

IN ANY PORTION OF THE UNITED STATES.

WE REFER BY PERMISSION TO

UNITED ELEVATOR CO., St. Louis. MERCHANTS ELEVATOR CO., St. Louis,
CENTRAL ELEVATOR CO., St. Louis. E. O. STANARD MILLING CO., St. Louis, and
J. W. KAUFFMAN MILLING CO. St. Louis Alton, Ill.
and Bethalto, Ill. BALTIMORE & OHIO R. R. CO., W. W. Peabody, Gen. Mgr. Chicago.
OHIO & MISSISSIPPI R. R. CO., J. F. Barnard, Pres. & Gen. Mgr., Cincinnati.
LOUISVILLE, NEW ORLEANS & TEXAS R. R. CO., James M. Edwards, Vice Pres't. and Gen
Mgr., Memphis.

GRAIN ELEVATOR MACHINERY AND CORN MILLS.

COMPLETE OUTFITS FOR FLOUR MILLS, HOMINY MILLS AND ROLLER PROCESS CORN MILLS.

MEAL AND GRAIN DRYERS.

Horse Powers, Engines, Pulleys, Belting,

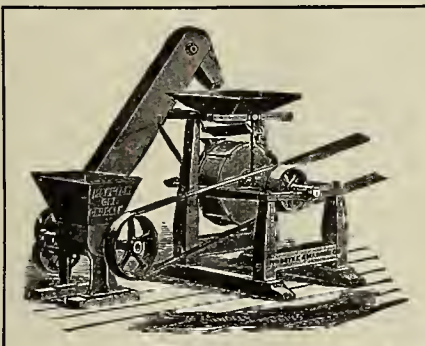
Corn and Wheat Cleaners,

Elevator Cups and Bolts,

Hominy Mills, Roller Mills,

Meal Bolts and Purifiers,

And Everything needed in the Handling
and Grinding of Grain.

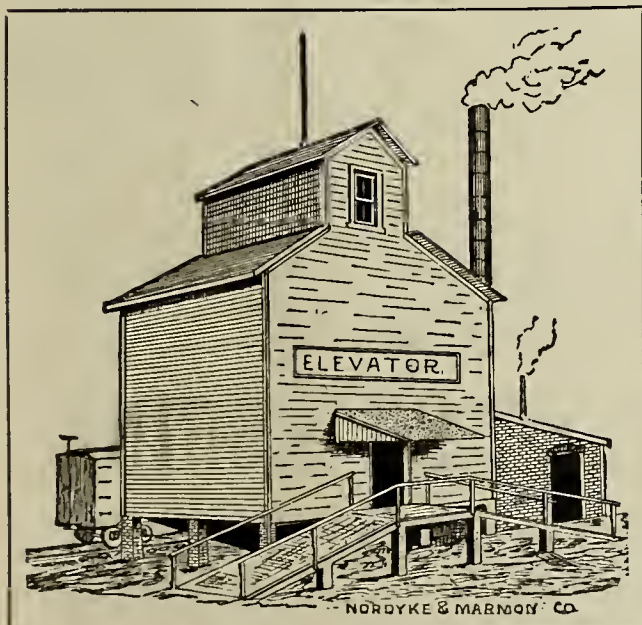


28 SIZES AND STYLES OF

PORTABLE CORN MILLS,

With or Without Bolts and Crushers.

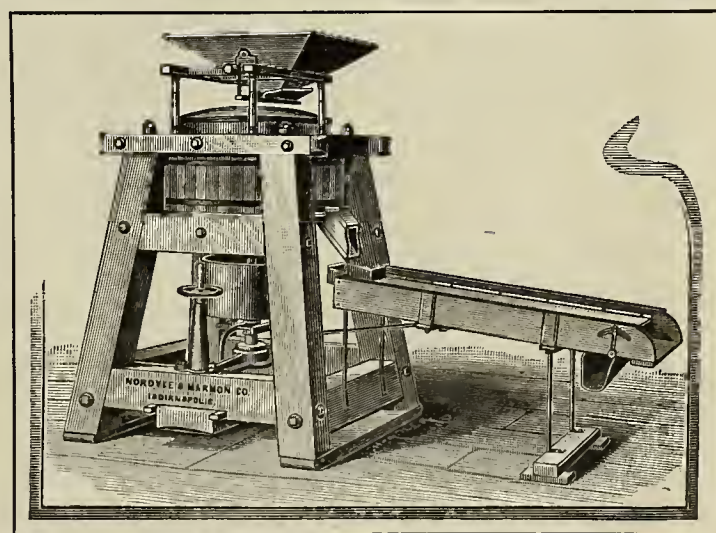
Received First Premium at Cincinnati, St.
Louis, New Orleans, Louisville and Indian-
apolis Fairs and Expositions.



BUY OUR LOW PRICED COUNTRY GRAIN ELEVATORS.

Send \$20.00 for working plans of a
5,000-bushel Grain Elevator costing
\$1,000.00, complete with power and ma-
chinery, warranted to handle grain faster
and cheaper than any other known device.
Also, larger sizes the same ratio in price.
Catalogue, with plans and full prices of
machinery, sent upon application.

ADDRESS



NORDYKE & MARMON CO., - Indianapolis, Ind.



Gibbs' Respirator Co., 30-36 La Salle St., Chicago.

DUST! DUST!
Gibbs' Patent Dust Pro-
tector protects the nose and
mouth from inhalations of
poisonous dust; invalua-
ble in mills, elevators and
every industry where dust
is troublesome. Perfect
protection with perfect ven-
tilation. Nickel-plated pro-
tectors, \$1 postpaid. Circu-
lars free. Agents wanted.

American Elevator and Grain Trade.

—PUBLISHED BY—

MITCHELL BROS. CO., CHICAGO.

\$1.00 PER ANNUM.

ROPER'S PRACTICAL HAND-BOOKS FOR ENGINEERS

Hand-Book of Land and Marine Engines.....	Price, \$3 50
Hand-Book of the Locomotive.....	" 2 50
Catechism of High-Pressure Steam Engines.....	" 2 00
Use and Abuse of the Steam Boiler.....	" 2 00
Engineer's Handy-Book.....	" 3 50
Questions and Answers for Engineers.....	" 3 00
Care and Management of Steam Boilers.....	" 2 00
Instructions and Suggestions for Engineers.....	" 2 00
The Young Engineer's Own Book.....	" 3 00

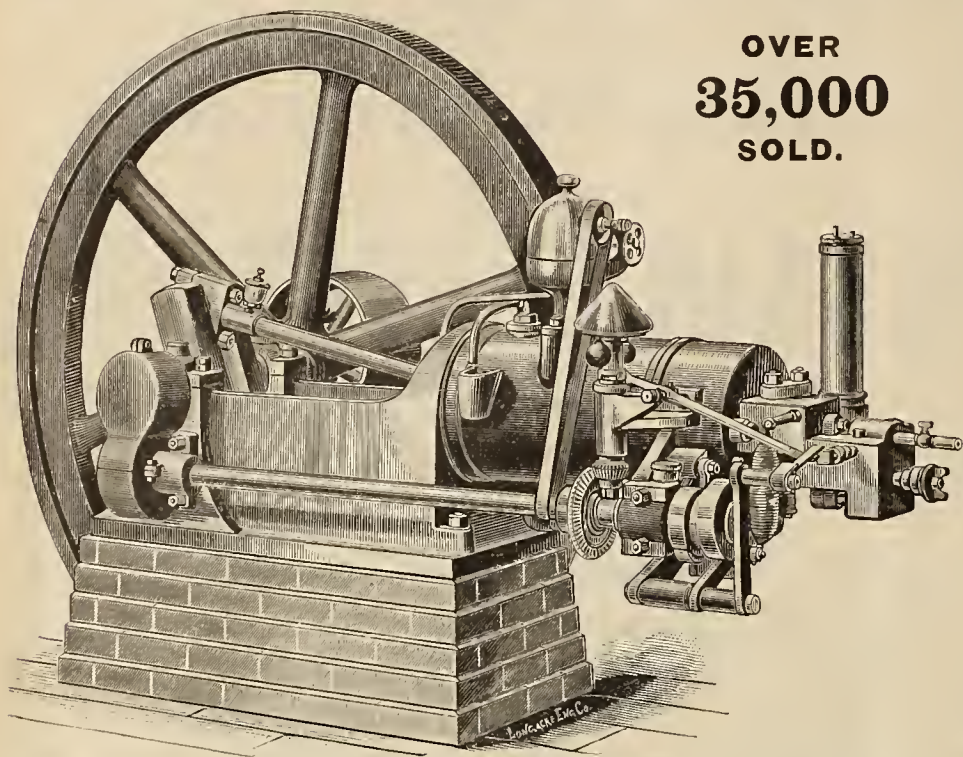
These books embrace all branches of Steam Engineering—Stationary, Locomotive, Fire and Marine. Any engineer who wishes to be well informed in all the duties of his calling, should provide himself with a full set. They are the only books of the kind ever published in this country, and they are so plain that any engineer or fireman that can read can easily understand them. Address

MITCHELL BROS. CO., 184 Dearborn St., CHICAGO.



Subscribe for the American Elevator and Grain
Trade and the American Miller; both one year
\$2.50. Address MITCHELL BROS. CO., Chicago.

The Modern Wonder.



OVER
35,000
SOLD.

OTTO GASOLINE ENGINE

WORKING WITHOUT BOILER, STEAM, ENGINEER,
COAL, ASHES, OR DANGER.

125 * Medals * and * Diplomas.

Capacity of Works: 800 Engines per Year.
Sizes: 2 to 60 Horse-Power.

Best and Cheapest Power for GRAIN ELEVATORS,
FLOUR AND FEED MILLS, CONVEYORS, ETC.

OTTO GAS ENGINE WORKS,

151 Monroe Street, CHICAGO, ILL.
33d and Walnut Streets, PHILADELPHIA, PA.

SAVE YOUR CAPITAL

Cheap Power.—Farmers Give it. Cheap Storage. Cheap Buildings. Quantity Unlimited.—Machine will Handle it. Cheap Insurance. No Fire. Costs Less than any other Practical Machine for Handling Grain.

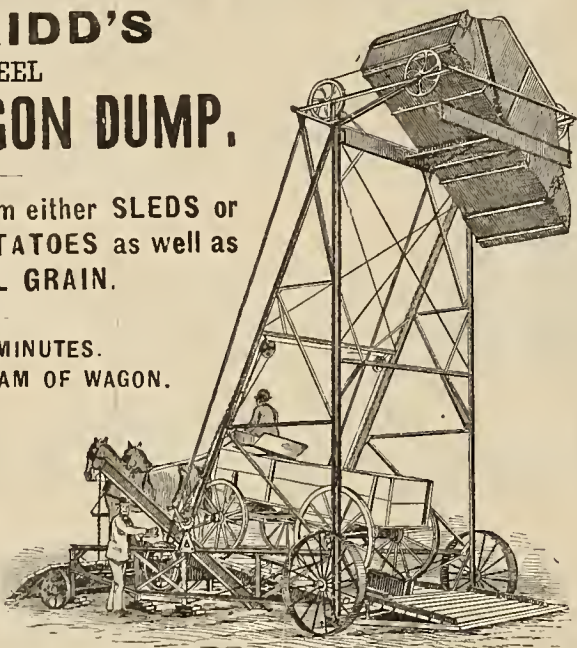
JOHN S. KIDD'S PORTABLE STEEL ELEVATOR and WAGON DUMP.

For Dumping or Elevating from either SLEDS or
WAGONS EAR CORN or POTATOES as well as
any kind of SMALL GRAIN.

Dumps and elevates a load in TWO MINUTES.
NO JERK ON HORSE OR JAM OF WAGON.

Farmers rather elevate their
loads on this machine than
pull up grades or dump on
the old style dumps.

CANADIAN PATENT FOR SALE.



READ THE FOLLOWING:

JOHN S. KIDD, Des Moines, Iowa:

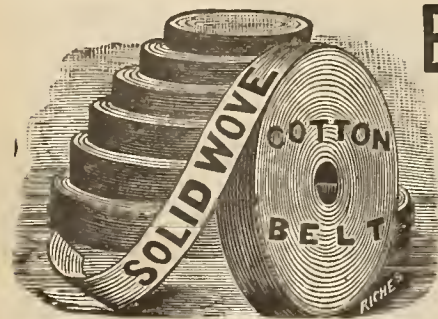
ODEBOLT, IOWA, September 14, 1891.

DEAR SIR.—We dumped 70,000 bushels of oats into our buildings in the season of 1890. Last July we set the dump beside the track and loaded the 70,000 bushels of oats into cars with it. Since then we have handled or loaded into cars about 15,000 bushels of corn, and are now filling our buildings with oats. The machine works in every way as well as last year, and better, for the reason we are more used to it. It works just as well in loading cars as it does in filling the buildings. It saved us five (\$5.00) dollars per day loading our oats into cars. We could hardly fill our buildings the old way, by having men to shovel them in and men inside to keep them away. We think the machine as near perfection as one can be made. We can dump twenty loads per hour, and if crowded, we can dump twenty-five or thirty loads per hour. No waste of grain and no trouble in any way.

Yours, COY & CASS

For Full Particulars Address

J. S. KIDD, - DES MOINES, IOWA.



Elevator and Mill Supplies

Leather, Cotton, Rubber

BELTING

Elevator Buckets, Bolts, Mill Irons, Etc.

Prices Close, and Quality the Best.

THE CASE MFG. CO., Columbus, O.

SEEDS

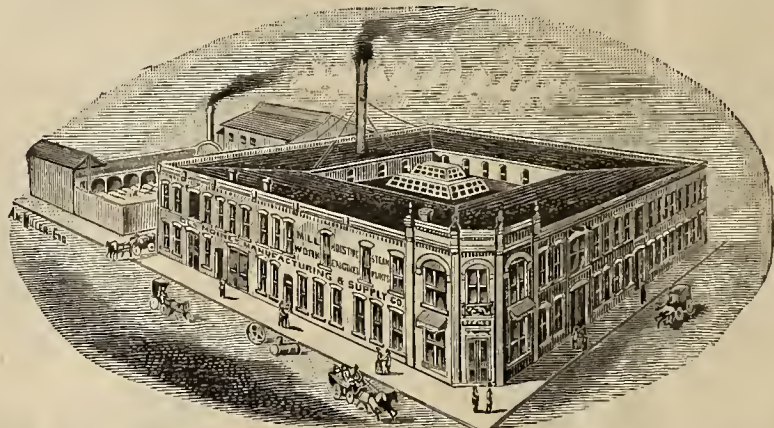
THE ALBERT DICKINSON CO.,
Dealers in Timothy, Clover, Flax, Hungarian, Millet, Red Top,
Blue Grass, Lawn Grass, Orchard Grass, Bird Seeds, &c.

Warehouses: 115, 117, & 119 Kinzie St. POP CORN,
104, 106, 108, & 110 Michigan St. OFFICES, 115 KINZIE ST.
1600 to 1614 Clark St. CHICAGO, ILL.

DES MOINES MANUFACTURING & SUPPLY CO.,

MANUFACTURERS AND DEALERS IN ALL KINDS OF

ELEVATOR MACHINERY & SUPPLIES!



ENGINES AND BOILERS,

Iron Pipe Fittings and Brass Goods, Pulleys, Shafting, Elevator Buckets and Gears.

Correspondence Solicited.

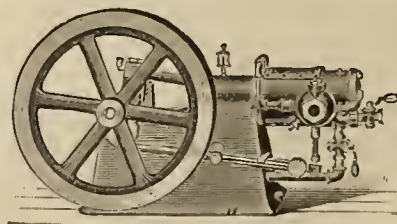
Estimates Furnished for Complete Plants.

Office and Works: 101 to 121 E. Court Ave., Des Moines, Ia.

REGAN VAPOR ELECTRO ENGINES.

Gas or Gasoline for Fuel. 1-2 to 10 Horse Power.

No Boiler,
No Fire,



No Flame,
No Danger.

Started by Spark From Small Battery.

Adapted to run Elevators and Feed Mills, and Guaranteed not to cost for Fuel over
2 cents per hour per Horse Power.

YOU TURN THE SWITCH—ENGINE DOES THE REST.

THOMAS KANE & COMPANY,

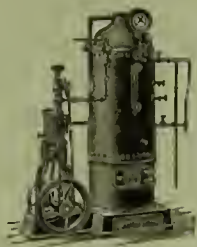
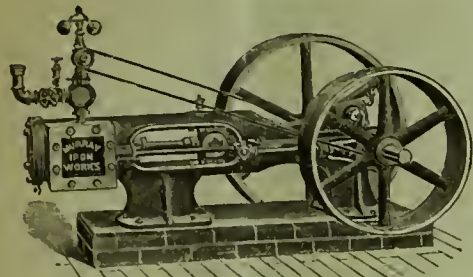
137 & 139 Wabash Ave., CHICAGO, ILL.

Catalogue on application.

THE MURRAY IRON WORKS CO.,

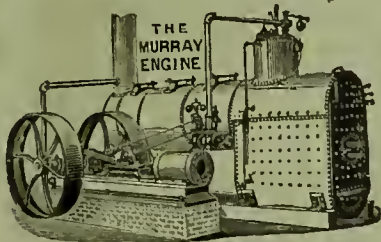
BURLINGTON, IOWA,
STEAM ENGINES.

ALL STYLES AND SIZES.



Horizontal Tubular Boilers.

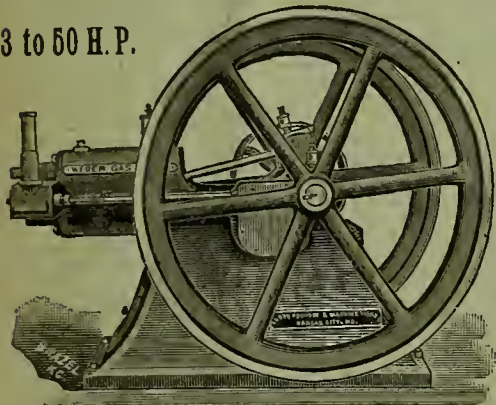
SHAFTING,
PULLEYS,
HANGERS
and GEARING.



Steam Pumps,
Injectors,
Brass Valves
and Pipe Fittings.

WEBER GASOLINE ENGINES, Fully Guaranteed

3 to 50 H. P.



"CANNOT COMMEND IT TOO HIGHLY."

Office of A. F. JONES,
PRATT, KANSAS, Sept. 3, 1892.

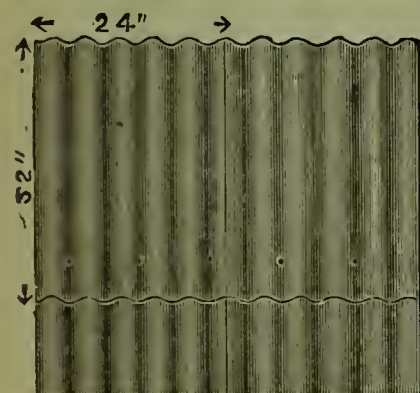
Weber Gas Engine Works, Kansas City, Mo.

GENTLEMEN:—Yours received this a. m. asking how I like the Weber. In reply will say that we are using one of your No. 4, 12 H. P. Gasoline Engines in our elevator, and cannot say too much for it. I consider it the best power on earth. We run one set of elevators, 9x11-inch cup, 52 feet high, carrying 1,000 bushels of wheat per hour; also Pease End Shake Cleaner, which cleans 1,000 bushels per hour, and it don't take half the power of the engine to do the work. It has given us no trouble whatever. I can make an engineer out of any of our men in ten minutes. It costs us 75 cents per day of 10 hours, gasoline at 12 1/2 cents per gallon. Cannot recommend it too highly to anyone needing power.
Yours very truly,
A. F. JONES.

Mention this paper. Address Drawer 250.

WEBER GAS ENGINE WORKS, - KANSAS CITY, MO.

JAMES A. MILLER & BRO.,



Surviving Partners of KNISELY & MILLER BROS.,
129 & 131 South Clinton St, CHICAGO,
Slate, Tin and Iron

ROOFERS!

Manufacturers of
**CORRUGATED
IRON**

For Roofing
And Siding

This cut shows our method of fastening Corrugated Iron to Elevator Bins to allow for settling and raising.

M. F. SEELEY.

J. S. SEELEY.

C. R. DELAMATYR

THE SEELEY ELEVATOR.

SEELEY, SON & CO.

FREMONT, NEB.

ELEVATOR BUILDERS

THE SEELEY ELEVATOR

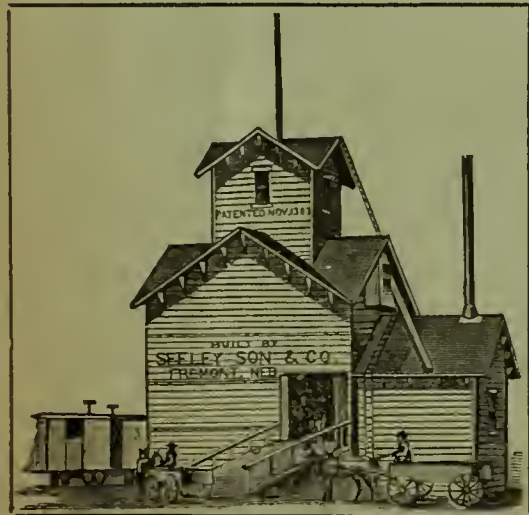
Stands at the head for Convenience and Economy of Operation.

You cannot build a first-class modern elevator without using some of our inventions, so you had better apply to us for plans and specifications and save royalties. A large number of persons are using our appliances and may expect us to call on them for royalties in the near future.

Also furnish all kinds of Machinery, Engines, Cleaners, Corn Shellers, Belts and Buckets, etc., etc.

We build Elevators in all parts of the United States and Canada.

With our experience, we can save you on these items more than cost of Plans. Correspond with us, and save costly mistakes.



BISULPHIDE OF CARBON,

Of Special Grade for Killing Mill Insects.

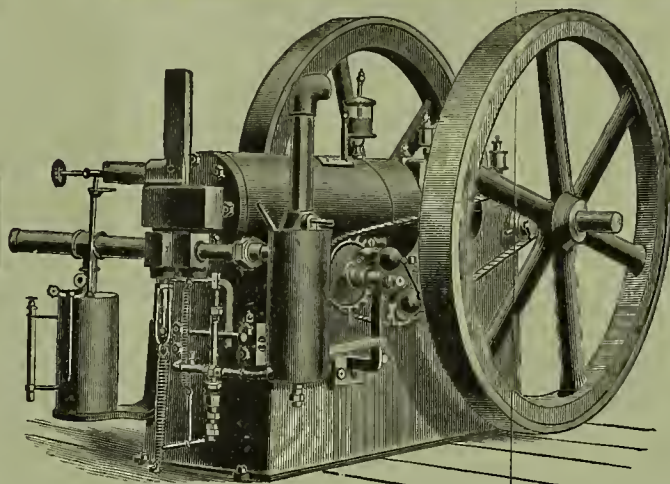
Send for Instructions and Order Direct from the Manufacturer,

EDWARD R. TAYLOR,

CLEVELAND, OHIO.

THE "LEWIS" IMPROVED

Gas and Vapor Engine.



No Danger.
No Boiler.
No Ashes.

No Fireman.
No Smoke.
No Lost Time.

Economical.
Durable.
Safe.

The most perfect and desirable motor for Grain Elevators, Feed Mills, Dynamos, Ventilating Fans. Made in sizes ranging from 1 to 20 H. P.

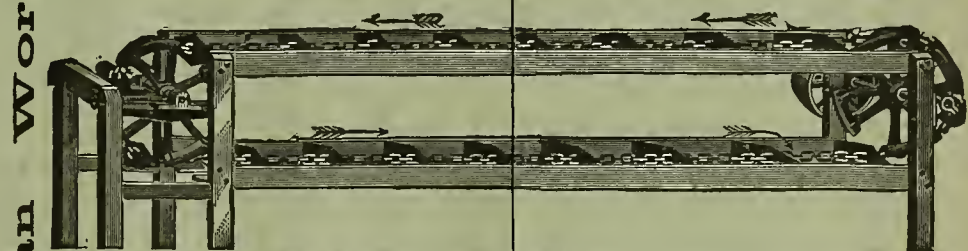
Write for catalogue to

WEBSTER MFG. CO.,

—o((SOLE MAKERS,)))o—

OFFICE, 195 South Canal Street, CHICAGO.

HARRISON CONVEYOR.



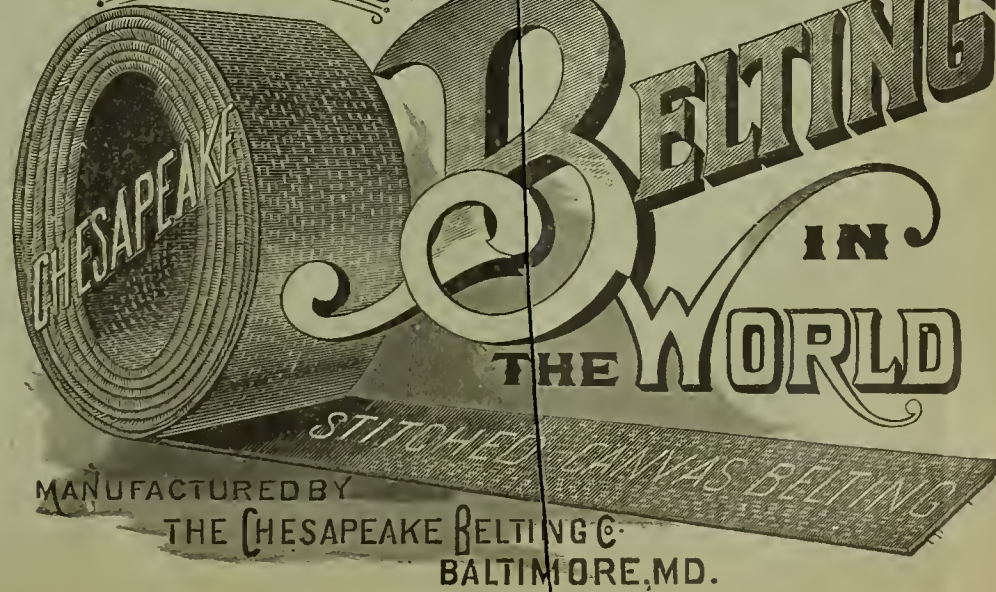
All Wrought Iron. No Mixing of Grain.

IT CARRIES Grain, Seeds, Ear Corn, Wet or Dry Malt, Coal, Sand, Sawdust, Tan Bark, Stone, Cinders, Clay, Paper Pulp, Cotton Seed, Etc., Etc.

SEND FOR CIRCULAR AND PRICE LIST.

BORDEN & SELLECK CO., Gen. Agts., 48 and 50 Lake St., CHICAGO, ILL.

THE BEST & CHEAPEST



IN THE WORLD

MANUFACTURED BY
THE CHESAPEAKE BELTING CO.
BALTIMORE, MD.

AMERICAN ELEVATOR AND GRAIN TRADE.

CONVEYORS	ELEVATOR BUCKETS.	ELEVATOR BOOTS.	ELEVATOR BOLTS.	BELTING
	 C. W. CRANE & CO., MILL AND ELEVATOR SUPPLIES, 724 & 726 South 4th St., MINNEAPOLIS, MINN. ELEVATING AND CONVEYING MACHINERY A SPECIALTY. Engines and Boilers, Link Belting and Sprocket Wheels, Standard Scales, Dump Irons, Etc., Horse Powers, Single and Double Gear. Extras for Horse Powers Carried in Stock. We manufacture all of our Elevator Machinery, and can furnish it cheaper than you can buy from dealers or commission men. WE SAVE YOU THEIR PROFIT.			
	PULLEYS.	SHAFTING.	HANGERS.	
				

THE HEIDENREICH CO.,

ENGINEERS AND BUILDERS OF

GRAIN ELEVATORS,

Office, 99-101 Metropolitan Block,
CHICAGO, ILL.

Cable Address: Jumper, Chicago.

REFERENCES:

OHAS. COUNSELMAN & CO.,	CHICAGO, ILL.
R. R. CABLE, Prest. O., R. I. & P. R'y	" "
S. W. ALLERTON,	" "
J. M. BALL & CO.,	" "
W. O. FUHRER & CO.,	MT. VERNON, IND.
FALPEY BROS. & CO.,	KANSAS CITY MO.

AND OTHERS.

Contracts Taken on
Capacities
from
5,000 to 2,000,000
Bushels.

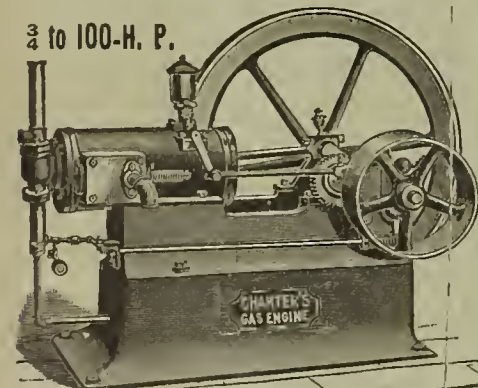
CHARTER GAS ENGINES.

The Pioneer Engine that Used Gasoline.

Started at the Head and has Always Remained There.

Is To-Day without a Peer, either on Gasoline or using Manufactured or Natural Gas.

No Boiler! No Fire! No Steam! No Coal! No Ashes! No Gauges! No Engineer! No Danger!



Reliability. Economy. Simplicity. Safety.
For printed matter, prices, etc., address
CHARTER GAS ENGINE CO., 400 Locust Street, STERLING, ILLINOIS.
Also Wire Rope Transmissions, Portable Mills, Pulleys, Shafting, Gearing, Etc.

40 BARREL MILL AND FEED BURR.

OFFICE OF THE
"DOUGLAS GROVE ROLLER MILLS"
Miche & Co., Proprietors.

WESCOTT, NEB. Oct. 18, 1892.

CHARTER GAS ENGINE CO., Sterling, Ill.

GENTLEMEN:—Your No. 6 Gas Engine is doing good work for us, running a 40 barrel mill, with Separator, Smutter and Purifier, besides a 26-inch Stone for feed and meal, all at the same time, and using about 50 gallons of gasoline in eighteen hours.
Yours truly,

MICHE & CO.

WITTE GASOLINE ENGINE.

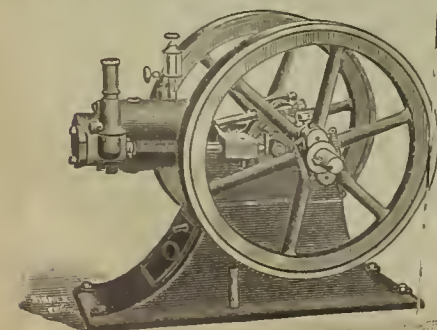
Simplicity.

Gas Direct from Tank. Every Engine Guaranteed.
Cost 1c per H. P. for one hour.

Especially adapted to Feed Mills and Grain Elevators.

Write for Catalogue.

WITTE GAS ENGINE CO.,
Kansas City, Mo.



WEBSTER MFG. CO.
Office 195 So. Canal St.
Works: 1075-1097 W. 15TH ST. CHICAGO, ILL.
MAC DONALD'S
HYDROSTATIC
Level
FRICTION CLUTCHES PULLEYS HANGERS BEARINGS & GEARING
LEATHER AND RUBBER BELTING
COKER-METCALF POWER SHOVEL
STEAM CAR PULLERS
COMPLETE EQUIPMENTS FOR ELEVATORS AND SPECIAL PLANTS FOR HANDLING GRAIN AND OTHER MATERIALS.



METCALF-MACDONALD CO.,

ARCHITECTS,

Engineers and Contractors,

BUILDERS OF

GRAIN ELEVATORS,

Office, 195 S. Canal Street,
CHICAGO, ILL., U. S. A.

We refer to any of the following for whom we have constructed plants:

Chicago & Grand Trunk R. R. Transfer, Elsdon, Ill., capacity 100 cars per day.
W. P. Harvey & Co., Kankakee, Ill., 125,000 bushels.
Fitchburg Railway, Boston, Mass., at Rotterdam Junction, N. Y., 450,000 bushels.
Middle Division Elevator Co., Chicago, Ill., transfer capacity, 30 cars per day.
Chas. Counselman, Chicago, Ill., 150,000 bushels.
A. C. Davis & Co., Horton, Kan., 120,000 bushels.
Dallas Elevator Co., Dallas, Texas, 750,000 bushels.
North Texas Mill and Elevator Co., McKinney, Texas, 150,000 bushels.
Columbia Elevator Co., Columbia, Tenn., 125,000 bushels.
West Chicago Street Railway Co., 150,000 bushels.
Ogdensburg Terminal Co., Ogdensburg, N. Y., 1,000,000 bushels.
Cockrell Grain & Commission Co., Dallas, Texas, 4 elevators.